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Indicators of quality in non-formal adult education as perceived by participants, key volunteers, and staff in the cooperative extension system in Massachusetts.

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INDICATORS OF QUALITY IN NON-FORMAL ADULT EDUCATION AS PERCEIVED BY PARTICIPANTS, KEY VOLUNTEERS, AND STAFF IN THE COOPERATIVE EXTENSION SYSTEM IN MASSACHUSETTS

A Dissertation Presented

by

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ABSTRACT

INDICATORS OF QUALITY IN NON-FORMAL ADULT EDUCATION
AS PERCEIVED BY PARTICIPANTS, KEY VOLUNTEERS AND STAFF
IN THE COOPERATIVE EXTENSION SYSTEM IN MASSACHUSETTS
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The problem addressed in this study was the apparent lack of attention in the literature given to the quality of non-formal adult education. Specifically, the study sought to develop an operational definition of quality by an attempt to develop a method for the identification of indicators of quality in non-formal adult education. The study also sought the perceptions of participants, key volunteers and staff in one adult education program, Cooperative Extension in Massachusetts.

Potential indicators identified by individual and group interviews with participants, volunteers and staff were assessed by a panel of three expert adult educators. One hundred and eighty-three participants, 63 key volunteers, and 89 staff responded to a mail questionnaire containing 58 potential indicators based on the panel's recommendations.

Each indicator was rated on a scale ranging from five, indicating "extremely important," to one, indicating "not important." Only two indicators were rated less than three, "important." Means were compared for between group differences by analysis of variance, with 25 of 58 indicators showing a significant difference. However, when the mean scores were used to rank the indicators, there was considerable agreement among the three groups of respondents of indicators in the upper and lower quartiles. Agreement tended to be more apparent between pairs of groups for the indicators in the second and third quartiles. Six factors were also identified among the 58 indicators, which were related to Bennett's Hierarchy, an evaluation model used to organize the indicators. These factors were also consistent with those in the literature relating to quality in higher education. The factors were: information delivery/communication process; people involvement; end results; organizational reputation; knowledge, attitudes, skills, and aspirations; and personal characteristics of staff.

Recommendations for further study were made, including using the indicators to evaluate adult education programs through a process modeled on accreditation programs in higher education.

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CHAPTER I

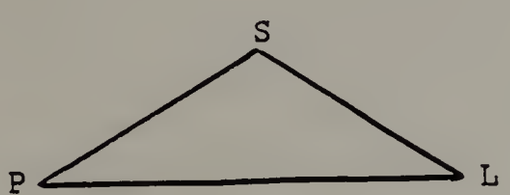
INTRODUCTION

> Quality . . . you know what it is, yet you don't know what it is. But that's self-contradictory. But some things are better than others, that is, they have more quality. But when you try to say what the quality is, apart from the things that have it, it all goes poof! There's nothing to talk about. But if you can't say what Quality is, how do you know what it is, or how do you know that it even exists? If no one knows what it is, then for all practical purposes it doesn't exist at all. But for all practical purposes it really does exist. What else are the grades based on? Why else would people pay fortunes for some things and throw others in the trash pile? Obviously some things are better that others . . . but what's the "betterness"? . . . So round and round you go, spinning mental wheels and nowhere finding anyplace to get traction. What the hell is Quality? What is it? (Prisig, 1975. p. 178)

Since the middle 1970s, lifelong learning has moved from a mere phenomenon to a major component of the American education system. Adult education has been the most rapidly growing segment in all education, increasing 17 percent between 1978 and 1981 (Cross and McCartan, 1984). As expressed by the College Entrance Examination Board (CEEB) (1978a), "American education has responded pragmatically, enthusiastically, and imaginatively to the needs of adults." Formal educational institutions have not been the only respondents to the learning needs of adults. In 1975, Tough estimated that nearly 98% of all adults undertake some form of learning project each year. Many do so on their own.

Many participate in community, government, or church sponsored learning activities. More than 21 million adults have been identified by the National Center for Educational Statistics as being in organized educational or learning activities associated with their jobs, their churches, colleges or universities, or other private or public agencies (Cross and McCartan, 1984).

According to the College Entrance Examination Board (1978a), "This vast array of adult learning activity taking place at all levels of American society calls for a critical and constructive analysis" (p. 11). Accordingly, the College Board proposed a research agenda that included a strong emphasis on issues of quality and why learners participate. The College Board conceptualized the relationship of learners (L), providers (P), and society (S) as the triangle shown below:



Characteristic of the inter-relationship of all three points of the triangle are issues of quality, including quality control by providers, why adults participate, and societal expectations for learning. Adults participate, perhaps, based on what they perceive as a quality program; providers attempt to offer a quality program based on what they perceive the learner expects. Societal values and

attitudes influence the way in which both learners and providers conceptualize and make decisions about quality.

The issue of quality is not a new one to education. The work of accreditation agencies, studies by national educational organizations, national conferences, and graduate dissertations are among the tangible evidence of the continuing concern and discussion over quality in education in the United States. However, this researcher has found little evidence of organized attention directed to the issue of quality in non-formal adult education.

In addition, in the current era of accountability for both public and private education programs, it is necessary for providers of non-formal education to be able to make statements about the quality of their programs in terms or language that decision makers or funders share. With the growth of non-formal adult education programs and activities, it is necessary for learners to be able to distinguish quality programs from those that do not meet their standards. Providers must be able to highlight those aspects of their programs that signify quality to potential learners.

Statement of Problem

The ability to maintain quality in education, as well as how to measure, certify, and promote it are long-standing concerns of both educators and the public. However, adult education apparently has not been subject to the same amount of scrutiny as have been secondary and higher education.

The lack of attention in the literature to quality is a problem in itself, as it leads to the question: can the dimensions, characteristics, or indicators of quality in non-formal adult education be identified? If so, how? A related problem is the apparent lack of a standard method for identification of quality or quality indicators in adult education.

The Purpose of the Study

The major purpose of this study has been to develop an operational definition of quality as it pertains to non-formal adult education. Further, several related purposes have been addressed in this research. First was the need to develop and test a method for identification of quality indicators in adult education. A second purpose was the identification of quality indicators as perceived by participants or users, key volunteers, and staff in a specific adult education program--Cooperative Extension in Massachusetts. The third purpose of the study was to ascertain the degree to which the participants, key volunteers, and staff agreed or disagreed on the indicators.

Specific Questions Addressed in the Study

Because of the typical short-term nature of non-formal adult education activities and its lack of credits and degrees, the ordinary quality controls by which institutions have assessed more traditional programs often simply do not

apply. The literature includes a number of questions about quality in conventional programs that, with a slight change of wording, become questions appropriate to ask about quality in non-formal adult education. For example, the statement "What are the processes that lead highly able [undergraduate] students to prefer the same set of institutions year after year?" (Astin and Solomon, 1979. p. 50) could be modified to "What are the processes that lead highly motivated adults to prefer the same set of learning opportunities year after year?"

In a discussion of indicators of quality, Holton in La Follette (1982) asks, "How do different constituencies--scientists and engineers, the public, bureaucrats and foundation administrators, industry, the Congress--assess quality of science, and what measures would be most useful to these groups?" The comparison between groups is also addressed in the question, "To what extent is institutional quality, as perceived by the student applicant, consistent with more objective measures of quality and with evaluations by enrolled students and faculty members?" (Astin and Solomon, 1979, p. 48). These questions are similar to those studied in this project.

The following questions were addressed in this research:

1. How can indicators of quality in non-formal adult education be identified or developed? Can a method be

developed that is not overly complicated, with the potential for use by other adult educators?

2. What are indicators of quality in non-formal adult education as perceived by participants, staff and key volunteers in an adult education program?

3. To what extent do participants, staff, and key volunteers agree or disagree on indicators of quality for an adult education program?

Assumptions of the Study

Analysis of the concept of quality has its roots in many cultures, particularly those of the ancient Greeks and the oriental philosophers. It was not the purpose of this research to attempt a philosophical or conceptual definition of quality, nor to attempt to review the various concepts of quality in any detail. This study makes the assumption that quality is "an attribute of value," (Carter, 1966 in Stauffer, 1981) and that it is usually an individual, subjective assessment.

Within this research, primary emphasis was given to identifying what three groups of individuals perceived quality to be in a shared environment, i.e., the Cooperative Extension System in Massachusetts, an adult education program in which members of these groups functioned either as participants, staff, or key volunteers.

It was assumed that the concept of indicators was valid. It was also assumed that a list of indicators could

be identified, developed, or generated. Further, it was assumed that several groups of people, namely participants drawn from a systematic sample in a public adult education program, the staff who conducted the program, and the citizen volunteers who guided the program, could articulate and assess their concept(s) or indicators of quality.

It was further assumed that the limits placed on the population sample would not adversely affect the outcomes of the study.

Delimitations of the Study

This study was limited to one non-formal adult education organization, Cooperative Extension, and is not meant to be necessarily representative of the other adult education programs. This study was also limited to perception of the importance of quality indicators, and did not attempt to measure or rate the quality of a specific adult education program.

Definitions of Terms

Certain terms, which were used frequently in this study, were defined as follows:

Participants were defined as learners who voluntarily engage in an organized non-formal adult education program. Users is a term used interchangeably with participants. Staff included that group of individuals who organize, teach, or otherwise conduct a non-formal adult education

program. Key Volunteer is a collective term that encompassed individuals who function as members of formal advisory groups, who provide guidance and direction for the major decisions about the program, personnel, and fiscal matters of a non-formal adult education program.

Indicator is a concept drawn from economics, public policy, and most recently, evaluation research. Indicator may be defined in relation to goals. Goals are statements of what we'd like to have happen; indicators are statements of what it (the goal) looks like when it, or part of it, happens (White, 1975). For instance, housing status, and mortality rates are two common indicators of the quality of life. In education, test scores and percentages of graduates who go on to college frequently are cited as indicators of the quality of education, although just as frequently their reliability and validity as indicators are debated.

Adult education, as used in this study, refers to organized non-credit learning activities in which adults voluntarily participate. Cooperative Extension refers to a cooperative effort of the United States Department of Agriculture, the state land grant university, and local government, whose mission is the application of research-based knowledge to problems of agriculture, families, youth, and communities through adult learning activities.

The Significance of the Study

The results of this study have significance to future research on quality in adult education, particularly as a starting point for further development of indicators of quality. More importantly, with some evidence of what quality means, comparison of adult education programs at different points in time, and eventually, to each other, becomes more feasible. The development of standards to which adult education programs can be compared also becomes possible. Such comparisons will add to the knowledge base of adult education, and may serve to increase the credibility of non-formal adult education.

Other possible significant outcomes include a better understanding of the both unique aspects and the commonalities of myriad adult education programs, if quality indicators can be developed and assessed across programs. Increased and more consistent use of quality indicators in program evaluation will result in program improvement, as well as more program accountability.

Additionally, this research may have benefit in the performance appraisal process, as staff will be able to compare their performance against the expectations of participants and key volunteers. Finally, marketing of adult education programs could more closely use the language or expectations of potential participants or users, and at the same time have a method to continually assess those expectations.

CHAPTER II

REVIEW OF LITERATURE

This chapter has as its objective a review of the literature pertinent to indicators of quality in adult education. However, in order to develop a background against which issues relating to quality in adult education can be examined, review of several distinct, but related, topics is warranted.

First, the concept of indicator, including history, definitions, development, and applications is explored to set the stage for the study's methodology. Second, indicators of quality as used in higher education are examined for the purpose of their adaptation or modification to more specific indicators for adult education.

Further, the limited literature specific to quality in adult education is reviewed. This is followed by a critique of three studies germane to quality in one form of adult education, i.e., Cooperative Extension.

The Concept of Indicators

The term 'indicator' is found not only in textbooks, and academic journals on sociology, education, planning, and evaluation, but in the daily newspaper, in weekly news magazines, and other mass media. "Leading economic indicators" are perhaps the most well known, but indicators of

reading level, crime, health, and other societal conditions are quite common. Just what is an indicator, how is one developed, and to what uses are indicators put? In an effort to answer these questions, this section traces the historical development of the concept of indicator and reviews the current definitions. Applications of indicators are discussed, and issues and concerns relating to the development and use of indicators are noted leading finally to suggestions for identifying or developing indicators.

An Historical Perspective of Indicators

Western civilization, according to Gross (in Bauer, 1966), has a long history and tradition of information gathering. In the introduction to Bauer's book in 1966, which, according to many, launched the contemporary social indicator movement, Gross gave his view of the beginning of this information gathering process. He suggested that the Bible records the first use of social measurements, or indicators, in the story of Joseph's forecast of seven fat and seven lean years based on an interpretation of Pharaoh's dream. This led to a careful measurement of all the lands in Egypt, so that one-fifth of the grain produced could be stored for future use. Gross also mentioned that after the Hebrews left Egypt, Moses was instructed by God to take the first recorded census. Later, in the New Testament, Mary and Joseph went to Bethlehem for what was a census.

During the Middle Ages, according to Gross, the Latin phrase, 'ratio status' was used to refer to the factual study of government and politics. This term was the precursor of our word 'statistic,' which was first used in Germany in the 1770s, reflecting the endless process of collecting information on the 'states of nations.'

Gross cited the comment of French statistician Moreau de Jonnes, who said about the new American Constitution, "without parallel in all history," because it contained a provision for a decennial census. Presidents Jefferson and Madison had this incorporated into legislation. Not only did the Constitution focus on the production or collection of statistics, but it directed their distribution as well through the medium of what is now known as the President's State of the Union address to Congress.

While most of the information gathered was economic, de Neufville (1975) stated that by the 1820s the United States began to gather information that was more social in nature, primarily due to the inclusion of immigration statistics in the census. In 1850, the U.S. census involved "inquiries about schools, libraries and newspapers, as well as on religion, criminals, paupers and wages. It not only asked new questions of individuals about marriage and literacy, but also called for a compilation of social data from political subdivisions," (de Neufville, pp. 11-12). Collecting statistics became an established government responsibility.

Several writers (Clewett and Olsen, 1974; Hamburger, 1974; Henderson, 1974) noted that the start of modern history of social indicators began with the 1933 publication of Recent Social Trends, the report of the President's Research Committee on Social Trends, appointed by President Hoover in 1929. This was the first attempt by the country to organize a comprehensive quantitative picture of itself and its changes. de Neufville suggests that the report was a predictable response to the radical changes that had occurred just prior to and immediately after World War I: in a time of rapid change, specific problems and answers are not always obvious, so a survey is made of everything in the hope that the problems will come into focus.

Although the report had little impact, the interest in social indicators did not die. The report Goals for Americans, commissioned by President Eisenhower in 1960, proposed national and international goals. At the beginning of the Kennedy administration, the Department of Health, Education, and Welfare (HEW) initiated the annual Trends and the monthly HEW Indicators. Concurrently, the emphasis on accountability--the relationship of costs of inputs to outputs of service--for social programs renewed interest in social indicators.

The landmark work that is often credited with launching the social indicator movement is Raymond Bauer's Social Indicators, published in 1966. In 1962, the National Aeronautics and Space Administration (NASA) became concerned

with assessing the possible social effects of the space exploration program. Carried out by the American Academy of Arts and Science, the project had as its purpose to determine the nature and magnitude of the 'second-order' consequences of the technological advances resulting from the American space effort. However, those involved in the project soon realized that the socially oriented consequences were considerable and often unexpected; yet the data, a systematic analytical framework, and appropriate methodology were not readily available.

In view of this, some project members turned their attention to how best to approach the problem of monitoring changes in the combined economic, social, socio-political, and technological aspects of society. The result, which called for a system of social accounting and the immediate need for indicators beyond economic, was presented as Bauer's book. The various writers argued that indicators are necessary if we are to succeed in improving the process of decision making. Also published in 1966 was a report by the National Commission on Technology, Automation and Economic Progress, which noted the lack of a system of charting social progress, and called for a system of social accounts. In 1969, HEW published Toward A Social Report, which contained an array of measures that would aid in monitoring progress or its lack, in reaching social goals.

In 1974, the Office of Management and the Budget published Social Indicators 1973. By this time, more than

1,000 articles and books representing virtually every field of social science had been published on the topic of social indicators, according to de Neufville (1974, p. 42). And in the decade since, indicators have continued to command attention. For example, the National Academy of Political and Social Science published America in the Seventies: Some Social Indicators in 1978, and America Enters the Eighties: Some Social Indicators, in 1981. And in 1980, the government published Social Indicators III, continuing the project started in 1973.

It is clear that social indicators have gone beyond a movement. However, as will become apparent in the discussion of definitions and uses, one reason for the proliferation of articles is the diversity of opinion on the subject.

Definitions

The social indicator movement, in cutting across many academic fields, has produced multiple definitions. The following definitions show both similarities in concept and differences. Many participants in the movement refuse to continue the debate over definition, preferring to focus on developing and using indicators.

In 1966, the acknowledged grandfather of the movement, Raymond Bauer stated, "For many of the important topics on which social critics blithely pass judgment, and on which policies are made, there are no yardsticks by which to know

if things are getting better or worse" (p. 20). That statement perhaps implies the most clear definition: indicators are a measurement tool to use in determining if things are getting better or worse.

White (1975) related goals and objectives to indicators in his definition that states that goals are statements of what we'd like to have happen. Indicators are statements of what it looks like when it, or part of it, happens. Objectives are the steps taken to reach the goal.

Fox (1974) answered the question, "what are social indicators" by citing a definition from the Social Science Research Council: ". . . statistical time series that measure significant changes in society. The social indicator expresses something about the composition, structure or functioning of . . . society and expresses it in quantitative terms that can be compared with similar measures in the past or future" (p. 4).

Biderman (in Bauer, 1966, p. 69) suggested that social indicators are quantitative data that serve as indexes to socially important conditions of society. Johnson (in Taeuber, 1981, p. 238) described indicators as "filtering devices which aid our comprehension of the broad significance of changing social conditions and trends."

Olsen (in Finsterbush and Wolf, 1981, p. 47) agreed in general with the ideas expressed in the preceding definitions, but went further to state that the term social is used in "a generic sense to include all realms of human

affairs--demographic, economic, organizational, political, and cultural." It is interesting to note the inclusion of economic as a component of social. Many writers have suggested that the social indicators resulted from dissatisfaction with the inability of economic indicators to reflect societal changes adequately.

The purpose of social indicators is to measure the performance of society in meeting social needs, according to Hamburger (1974, p. 3). She went on to suggest that there need not be a significant correlation between tangible economic progress, and the less tangible, subjective feeling of satisfaction with what is called the quality of life.

Several writers (Henderson, 1974; de Neufville, 1975; and Fischer, 1980) have described indicators in relation to four concepts. First, social indicators are a collection of social statistics that do not fit into a theoretical framework. In other words, they are gathered and presented without a specific purpose in mind, although such statistics may be later used for a defined objective. The second category, social accounting, was initially proposed as an outcome of the NASA project (Bauer, 1966) and assumed that the impact of particular policy and program actions, and the combined effect of these actions can be determined.

A third category, subsystem variable measures, considered social indicators as both input and output indicators. There are goal output indicators, which describe in a summary view the levels of and changes in, output. Dis-

tribution output indicators show how and where output is distributed. The fourth category of definitions of social indicators concerns what is known as quality of life indicators. These are defined as the subjective or qualitative perceptions of a situation.

Johnson (in Taeuber, 1981, p. 242) distinguished five types of indicators:

1. Informational indicators describe objective conditions, subjective perceptions of conditions or reactions to such conditions.

2. Predictive indicators are measures that delineate plausible futures or outcomes if trends were to continue undisturbed or if alternative conditions were to develop based on a model.

3. Problem-oriented indicators are measures designed to identify the location, type and severity of particular problems.

4. Program-evaluation indicators monitor the progress of programs and gauge their effectiveness and efficiency in meeting specified policy objectives.

5. Target-delineators serve to identify geographic areas or population groups that need remedial measures, toward which policy action might be directed.

Andrews (1980) stated that indicators are a form of secondary, non-attitudinal statistical data used to develop insights about the behavior or well being of individuals and communities. Marshak (in Clewett and Olson, 1974) stated that a social indicator is a describable trait, characteristic or attitude which is either applicable to a substantial segment of the population or has shown evidence of recent change in magnitude or intensity.

In limiting the geographic scope of an indicator, the Community Activity Indicators Project (CAIP) of the Lyndon B. Johnson School of Public Affairs (University of Texas, 1974) defined the term community indicator as: a quantitative measure which allows inferences to be made about the status of a community condition and facilitates the measurement of change in that condition over time.

In summary, most definitions contain or imply concepts of social goals, measurement, change, time series, performance, and quantitative factors. There is less agreement about the concepts of objective or subjective dimensions of indicators as well as the use of qualitative measurement, which becomes quite evident when uses of indicators are discussed.

Generic Uses and Applications of Indicators

There are as many actual and proposed uses of indicators as there are definitions. This section first presents an overview of uses described in the literature in a generic perspective, that is, the uses described can be applied in a number of academic fields. Second, several specific applications of indicators in such fields as health, education, and community development are noted.

Indicators can be considered in several ways not unrelated to the generic/specific framework noted above. First, as conceptual, that is, influencing thinking about an issue without putting the information to any specific use; second,

as instrumental, that is, specific ways in which the indicator was/is used for decision-making or problem-solving purposes.

One early proposed use of indicators, which was noted in the review of the history and definitions of indicators, is the concept of social accounting. Gross (in Bauer, 1966) outlined the complexities of developing a concurrent system to the economic accounting system (Gross National Product or GNP) which is the primary measure by which the 'state of a nation,' specifically the economic status of the country, is judged. Gross suggested a model to evaluate the state of a social system at the national and international level which broadened economic indicators to a set of social indicators.

Two key elements of his model were system structure and system performance. The first is the relationship of the systems' parts to each other; the latter, how inputs are acquired and used to produce outputs. National goals and values, as well as levels of the subsystems involved, need to be specified. Operationalizing such a social accounting system is difficult. Describing the inputs and outputs of social programs rests on identification of a common denominator, for example, health and education. Correctly interpreting the inter-relationships and interactions between and among variables and indicators, and finding a descriptive or causal model in which the variables work are also necessary (Fox, 1974; de Neufville, 1975). Gross

stated in 1966 that the "maturation of social accounting concepts will take many decades" (Bauer, p. 271).

Although social accounting has not yet achieved equal status to the GNP, many of the concepts in this approach have been adapted and applied at less complex levels. While the success of these applications may be debated, the continued employment of indicators suggests that they are a useful way of thinking.

Most of the following generic uses of indicators come under the general concept of planning. While this may be too broad a categorization of uses, it does separate indicators into two areas: before an innovation, action, or policy is implemented or a change occurs; and after such events take place. It is only one way of thinking about the diverse applications of indicators.

One generic use of indicators is for <u>needs assessment</u>. Indicators are generally thought of as measuring the actual or approximate extent of a social condition. For example, the number of arrests, the number of convictions, the number of criminal acts would measure the amount of crime. Although as we shall see later, such measures have limitations, such descriptive social statistics are generally available at various levels for communities and other geographic units. Little interaction with client groups is necessary, although this too may also be a limitation.

The target delineators described by Johnston (Taeuber, 1981) are an example of indicators used for needs assess-

ment. They identify geographic areas or population groups toward which policy actions might be directed, often reflecting a need. Franklin and Thrasher (1976) note that indicators have often been used in needs assessment, using a wide range of readily available statistics.

Meehan (in Fischer, 1975) states that functions of social indicators include: (1) providing a way of keeping track of social changes and assessing their effects; (2) focusing attention on salient social problems; and (3) providing an early warning system for social upheaval. These functions may be considered needs assessment.

Another generic use of indicators is to predict or assess social impact. Although the Environmental Impact Statement is more widely known, the social impact statement is of equal importance. As the history of indicators established, NASA was interested in the impact of the space program on the social conditions of the country. Both government agencies, and private corporations developed such statements, using social indicators as an integral part of the analysis.

According to Olsen and Merwin (1976), social impacts refer to all changes in the structure and functioning of patterned social ordering that occur in conjunction with an environmental, technological, or social innovation or alteration. They noted that a social impact is a dynamic process, interacting with its original causes. Pragmatically, it uses a wide variety of standardized quality of

social life indicators that are measured with objective data, weighted according to subjective value judgments, and combined into factor indexes. Olsen and Merwin further divided social impact efforts into social impact research, which assesses existing programs, and social impact forecasts, which consider planned programs or policies.

Finsterbusch (1981) stated that the primary goal of social impact assessment is to facilitate decision-making by calculating the full range of costs and benefits of proposed alternative courses of action.

A related use of the social impact process is the family impact statement, which looks at a specific segment of society. According to Kammerman (1976), an impact is the outcome or significance of specific actions. She pointed out that impacts may be direct or indirect, intended or unintended, positive or negative, or a combination. Kammerman went on to define a family impact statement as a report prepared by an organization or individual(s) reviewing and analyzing a proposed law, policy, regulation or project with a view to assessing its potential effects on all families or on certain categories of families. Kammerman stated that social indicators must be involved in the development of family impact statements, and suggests that social indicators is a field that is destined to grow and become even more significant in the development of family policy than it is today.

Related to social impacts is the use of indicators for policy formation (de Neufville, 1975; Johnston, 1979; Finsterbusch, 1981, etc.). According to Johnston, before decisions can be reached in regard to particular social issues, before programs can be planned and implemented, information relating to "where we stand and where we are going" must be gathered and analyzed (p. 3).

de Neufville noted that high quality, publicly acceptable indicators are particularly critical to a controlled social or economics system. Decision makers have to decide, not for themselves, but for the collective body, and indicators provide a way to gain perspective. According to de Neufville, indicators have been used with varying degrees of success in policy formation. The unemployment rate is cited as a successful indicator, the standardized family budget as an indicator without grounding in a theory, and the crime rate as an inadequate indicator. Despite these concerns, indicators for public policy will become more important, according to de Neufville, as the public demands more accounting for public money spent, and policies of governments become more complex.

Another use of indicators is also a version of planning, known as forecasting. Lewis (1978) wrote that long-range plans need to be guided by forecasts of the future. Social trends, based on indicators, should guide policy makers in making the day-by-day decisions, that, according to Lewis, have influence over the future. Lewis

suggested four approaches to synthesizing and generalizing information on the impact of social trends on education: writing scenarios, constructing cross-impact matrices; extrapolating trend lines, and relating trends to issues.

Of these, scenarios are possibly the easiest to use in a non-formal setting. According to Lewis, an exploratory scenario portrays a probable future based on a continuation of existing trends modified by probable events. A good scenario requires a synthesis of knowledge regarding trends and possible impacting events. In addition, the scenario needs an overlay of values to be achieved in the future and a dash of creative imagination. A normative scenario portrays a possible alternative future that may be achieved through planning and deliberate actions.

For scenarios within scenarios, one can turn to the creative imagination that results in the genre known as science fiction. A number of books use views of the future, based on societal trends to deliberately plan strategies to attempt alternate futures closer to their values. The best known of these is probably the Foundation Trilogy by Asimov (1951), in which a psychohistorian sees in a variety of events and trends the patterns of emerging societal decline and sets out to save all knowledge in order to shorten a coming dark millennium. A similar scenario is the basis for The Phoenix Legacy, (Wren, 1981) in which scientists, using a number of indicators, and sophisticated computer models, also forecast a dark age, and take steps to avoid it.

Not only do social scientists develop forecasts using trends in society, but business and industry does as well. In the past decade, with its frequent shifts in attitudes and behaviors, the marketing establishment has devoted resources to social forecasting, particularly social indicators. The American Management Association has published several books on social indicators (Clewett and Olsen, 1974; Hamburger, 1974). Lazer (1980) pooled the expertise of a sociologist, an econometrician, an economic demographer, and a political scientist to look at the next 20 years. The results, which focused on emerging lifestyle developments, and implications for future marketing opportunities, used indicators as a tool.

Since the appearance of social indicators as a formal measurement tool, they have been applied to assessing what is termed quality of life. In general, quality of life means what people think is important to their lives. According to Katzner, (1979) quality of life may be useful in explaining and predicting social, political, and economic phenomena. And thus, the development of government policies to improve the quality of life becomes a distinct possibility.

The use of indicators in measuring and describing the quality of life ranges from existing social statistics, which are objective (employment rate, years of schooling, et al.) to subjective measures, based on individuals' responses to questions about their perceptions of the quality of their

life. The differences between objective and subjective measures or indicators of quality of life have sparked much debate. For example, Coleman (1975) noted that quality of life was rated higher by the people who lived in a certain geographic area, than by more objective measures such as income, employment and education, used by outsiders. However, between two groups of people in the same area (knowledgeable--such as agency staff, and householders) there were more similarities than differences, suggesting that a quick survey of knowledgeable people in a county may serve as a substitute for a more detailed household survey. Coleman concluded that subjective indicators have some validity and usefulness.

Quality of life indicators have been developed for the components that are thought to make up quality of life, such as education, employment, health, and cultural life, to name a few. Such indicators have been applied on a micro scale, either by looking at parts of a component, such as satisfaction with married life (Marans, 1980), or by studying a small geographic area (Marshal, 1977). Michalos' three-volume North American Social Report (1981), a ten-year comparison of the quality of life in Canada and the United States, is an example of the macro approach.

Quality of life indicators may be used either for planning, or for evaluation of the changes as a result of a social intervention, such as a social welfare project. Despite the earlier division of indicators into 'before and

after' categories, occasionally they may be used in both situations.

One of the major arguments in the social indicator movement is waged over the use of indicators in program evaluation. According to Rossi and Gilmorten (1978) the mere accumulation of time series data on selected indicators provides little more than descriptive data concerning societal conditions and does not permit separation of the effects of public policies and programs from the impact of social processes, such as migration, urbanization, and industrialization.

Steele (1977) noted that scientifically produced data are a valuable input in evaluation, but seldom stand alone from it. Often, the focus is on the data gathering rather than on data use. However, both Steele (1977), and Scriven (1980) included indicators in overviews of evaluation approaches. Steele listed Social Indicators in the category of 'Results--Evaluation of Outcomes and Effects,' although she also noted that "those programs dealing with visible entities that are recorded in public data can use those indexes to plan and evaluate programs" (p. 210).

Scriven (1980) defined an indicator (in evaluation) as a "factor, variable, or observation that is empirically or definitionally connected with a criterion" (p. 68). For example, a judgment by students that a course has been valuable is an indicator of that value. He went on to say that constructed indicators are variables designed to reflect the

health of the economy (a social indicator) or the effectiveness of a program. Weiss (1972) pointed out that indicators are operational criteria of program success, and are the dependent variable of the study. She stressed that an evaluator has to find out the program's goals, translate them into measurable indicators of goal achievement and collect data on the indicators.

Program evaluation is one of several purposes indicators play, according to Johnston (1979). Yet Franklin and Thrasher (1976) believed that social indicators are a promising, yet unrealized area of evaluation, citing difficulty in matching indicators used in needs assessment (the before) with the indicators used in evaluation (the after). Miller (1977) agreed with this concern in her discussion of indicators in the evaluation of education. She noted that the difficulty of showing the relationship of the program inputs to some desirable behavior. For example, teacher performance and per pupil expenditure may be related to student performance, but it is difficult to exclude other variables, such as home and community influences. Indicators can be used to describe changes, but not account for them.

Thus, the use of indicators for evaluation, like social accounting, is a developing model, with a number of concerns to be overcome before it can be applied reliably. This does not however, preclude the use of the concept of indicator to think about outcomes of programs.

The social indicator movement may be divided into two periods of time: first, from the mid-sixties to the early seventies, when discussion of indicators focused on developing definitions, theories, and models, with limited effort at actually applying indicators; second, from the mid-seventies to the present, wherein indicators have been applied (not always successfully) to a wide variety of situations.

Selected Fields of Application

The following are examples of the development and use of indicators in several selected fields.

Business. In the corporate world, social indicators have the following benefits, according to Kelley (in Clewett and Olson, 1974):

- the development of a social accomplishment corporate balance sheet;
- identification of areas or problems requiring corporate confrontation and correction for social accomplishment purposes and guidance in setting priorities;
- development of benchmarks of corporate contributions to social progress over time;
- identification of purchase motivations and behavior, so as to develop products and appeals appropriate for various socio-market segments;
- identification of new social requirements and future markets;
- provision of a scale of achievement against which to measure management and the corporation.

Thus, in business, indicators serve a wide range of functions from assessment to evaluation.

Community Development. The Lyndon B. Johnson School of Public Affairs (University of Texas, 1974) through a special Community Analysis Research Project, initiated a related effort, the Community Activity Indicators Project (CAIP). CAIP was designed to create community indicator systems in a number of Southwest cities in an effort to provide city key volunteers, with sound, quantitative information about their cities. CAIP initially identified uses for indicators into four general classifications: (1) information applications; (2) planning applications; (3) decision-making applications; and (4) research applications.

Specifically, the following information applications were recommended: as a means to disseminate information to the public at large, as a training tool for new city personnel, as a city management information system, as a city council information tool.

Recommended uses related to planning included indicators as a means to identify problems. CAIP did not recommend indicators as a means to problem analysis or program development, because indicators can neither point to practical solutions nor determine what resources are needed to overcome problems; moreover, indicators lack the capacity to establish casual relationships.

As for decision-making, CAIP recommended that indicators could be used as a guide for prioritizing and as an aid

in determining the proper allocation of resources among geographic units in a city, but not as a primary tool in making budgetary decisions. CAIP did not recommend indicators as a tool in program evaluation, citing the fact that indicators cannot determine whether a change in the magnitude of a problem is due to the influence of a specific program designed to eliminate the problem. CAIP also suggested that cities could use indicators as an aid in providing baseline data for use in establishing long-term city goals and as a tool for monitoring progress toward those goals.

Health. Health statistics have long been used to reflect the overall conditions of the population in relation to certain diseases, as well as to compare segments of the population (age, geographic location, et al.). However, as with other social indicators, there is question about exactly which dimension of health is best measured by which indicator. Infant mortality does not accurately reflect the overall health status of a population, yet it is a frequently cited health indicator. The State of Massachusetts (Kovar, 1980) attempted to present more appropriate categories of health indicators in an effort to reduce this concern. The report identified health status indicators in four categories that may more accurately reflect the situation. These are: (1) life-style indicators; (2) biological factors; (3) environmental factors; and (4) the health care system. These indicators describe what is and may be helpful in needs assessment, forecasting, and policy formation.

Environment. The U.S. Army Institute for Water Resources (1977) contracted a study of social indicators that could be used to assess the impact of government public works projects, such as the construction of dams on the environment. The project identified over 700 variables used by five U.S. Cabinet level departments. These were consolidated to reduce duplication, and specific indicators for each variable were developed, along with sources and time to collect the indicators. This model was applied to a specific dam building project to illustrate the process. Although the model does not make judgments, it presents factual information in an organized manner, which will aid in objective decision-making in terms of environmental impact.

Adult Education. Cooperative Extension, University of Michigan (1979) conducted a special project in cooperation with the U.S. Department of Agriculture to study the "Indicators and Levels of Change in Consumer Competence" which resulted from several educational delivery modes. The project built upon the use of program result indicators developed by Elliott (1977). The concept of indicator proved satisfactory in the design of the study, establishing practice change among participants, even though four different programs were evaluated. The authors noted that without a standard to which to compare results, meaningful interpretation of the data is difficult. However, the

result indicator format offers a more precise measurement than previous evaluation efforts.

Youth Education. In another Cooperative Extension project, A Statement of National 4-H Goals (1982) was developed as a model to facilitate 4-H evaluation. For each of ten goals, one or more educational objectives were developed along with an example of a specific indicator of success. The indicators were presented as measurable behavioral objectives, such as "___ percent of youth, who after six lessons, will be able to analyze the nutritional value of their school lunch." The related goal was "acquire subject-matter skills," and the objective was "demonstrate skills in selection, preparation and/or construction of food and fiber products."

Science. In 1979-80, the National Science Foundation and the National Endowment for the Humanities supported a series of faculty seminars conducted under the auspices of the Massachusetts Institute of Technology and Harvard University to

> explore what old and new operational meanings might be associated with the concept of "quality", when applied either to the state of science and technology or to the impacts these have on human life. Can indicators be developed, and if so how, which are sensitive to the various contexts of science--conceptual, ethical, social and historical? (Holton, 1982, p. vii).

According to Holton, science indicators have received serious attention only in the past decade, and that effort focused on quantitative indicators. Despite concern over

quality in science, little effort has been directed to assessing it. According to Brooks (in Holton, 1982), indicators in science should measure the state of science and be translated into indices of welfare for society as a whole. Among the seminar presenters (and an indicator of the resources brought to bear on the issue) were Sissela Bok, noted author on ethics; three U.S. Congressional Representatives and one Senator; Daniel Yankelovich; the editor of 'Daedalus'; the Vice President and Chief Scientist, IBM, who also chairs the U.S. National Science Board; and the president of the Social Science Research Council, along with a number of distinguished faculty.

The seminars looked at indicators of quality in science from industry, government, and public perspectives, as well as from the internal view of scientists. No conclusions were reached as a result of the seminars, other than the conviction that serious consideration must be given to "the social functions of the scientific enterprise and to constructing a more effective decision-making partnership between the public and the scientific community."

The preceding examples demonstrate that indicators have progressed from a movement to actual use. While there is still debate over the appropriateness of that use, indicators have found acceptance at least as a starting point for thinking about a great many social issues.

Concerns and Limitations

As with any social science methodology, social indicators have limitations in actual use. Some are of the common sense variety; others are evident only to those well versed in complex statistical concepts. Some of the more frequently mentioned limitations are described below.

The collection of the data needed to develop or support indicators may have limitations of availability, and accuracy. Desirable or even crucial data may be unavailable or not in a usable form. It may never have been collected, or an agency may be unwilling to release it. Right-to-privacy may be the limiting factor for both agencies and the individuals who must respond to requests for information.

de Neufville (1975) suggested that a respondent or enumerator may fail to understand precisely what information the designer of the survey wants. Miscommunication can occur among those designing the instrument, those administering it, and those submitting to it.

Another potential limitation is the decision as to which indicator. The inclusion of certain indicators, or the omission of others reflects a judgment of what is or is not important. The bias of the researcher may contribute to which indicators are used. What criteria have been or will be used in selecting and organizing the data? As Johnson (1979) noted, "No matter how large a report is, the prepar-

ation requires the rejection of far more data than are finally included."

In selecting indicators, the question of validity is a key concern. Does the indicator really measure what it intends to measure? Is schooling, in number of years, or test results, a true indicator of learning? What assumptions underlie the choice of a particular indicator? Meehan (in Fischer, 1975) emphasized that the fact that a particular statistic is gathered regularly and widely used, accepted, or even acted upon, does not make it a good indicator of some significant dimension of human life.

Does the indicator respond quickly and noticeably when the phenomenon changes, or does it hide the real problem? de Neufville (1975) cited the mortality rate. Although used as an indicator of health, it is really not sensitive to health. de Neufville noted that it may reflect the age composition of the population rather than the general level of health. More importantly, many diseases are non-fatal and, therefore, don't show up in mortality figures.

Since validity is a most important criterion for an indicator, how does one determine validity? Three practical approaches to 'estimating' validity were cited by de Neufville (1975): first, look at the indicator intuitively, and based on all that one knows about the phenomenon, decide if the measure sounds reasonable; second, observe if the phenomenon behaves the way that you expect it to, since this implies that you have some idea of how it should move;

third, look at behavior of the same phenomenon to discern if movement is similar.

Scioli (1975, p. 14) noted that unless the analyst can disaggregate and reconstruct the original time series to suit his own needs, he may be caught in a double bind of being unsure of the data's original validity and the validity of their use for his purposes.

Indicators are most valuable when they reflect data collected over a period of time. Such time-series must be consistent, that is, have regular intervals or specifically account for differences. Points in time should be clearly identified as to date, and whether the data resulted from different agencies, collection methods, etc. Johnson (Taueber, 1981) described the difficulty of adjusting time series of data of limited comparability. Lengthy time-series, so important in monitoring long-term trends and changes, are frequently affected by changes in concepts, definitions, or data collection procedures. Thus, comparability is significantly reduced. Johnson is concerned that these changes are not always adequately documented.

In contrast, de Neufville (1975) noted that an unchanging instrument does not always bear a constant relation to the phenomenon over time, if the phenomenon changes in fundamental ways. de Neufville also suggested that the time period used can also have significant effects, and should not be an arbitrary choice. Basic policy changes require time to create, implement and have effect. Some indicators

may need to reflect five or ten year periods; others may require annual measurement. The question: how to know in advance, what to collect and record, at what points in time?

Somewhat in answer, Hamburger (1974) offered the following guideline: have comparable data available for successive periods of time, so that intertemporal difference can be taken to signify change rather than mere fluctuations due to errors of measurement or variation in study design. An additional limitation of indicators, which by definition, are time series data, is that they may not be helpful in short-term applications.

Geographic boundaries may pose limitations to the use of indicators. Different statistics for an indicator may be measured and reported at geographic levels which are not congruent, such as census tract information, and voter registration by voting precinct. Social service agencies, school districts, and municipal and county governments may not all have the same service areas in terms of data collection, even though they seem to operate in the same area. Geographic limitations may be offset by access to raw data, and the resources, such as staff and computers necessary to reorganize it by the necessary geographic totals. Another measure, that may offer additional information, is to make map overlays so as to see the areas that are included in the data that is available.

The use of objective and subjective data is often a point of concern, if not a specific problem or limitation.

Objective data usually refer to figures such as population figures, test results, etc., while subjective data refers to results from surveys or polls of the population on their opinion or perception of certain phenomena. Johnson (in Taeuber 1981) made the point that the crucial difference between measures of subjective phenomena and measures of objective phenomena is that the former cannot be verified by independent observation.

Johnson also noted that there are ethical and political issues connected with the legitimacy of attempting to assess people's inner thoughts, feelings and beliefs, particularly when such investigations are conducted under government direction. Mancini (1978) postulated that much of the variability found in subjective measures may be due to the fact that people won't reveal negative aspects of their lives to strangers.

Yankelovich (in Clewett and Olsen, 1974) outlined mistakes that can be made in using survey findings for social indicator purposes. One of these is named the "the misleading meaning fallacy" by Yankelovich. He illustrated it by noting that 70% of the people in an opinion poll reportedly expressed grave concerns over air pollution. It was this figure that got the attention, yet among the remaining data were the figures that indicated that only 10-30% were willing to support solutions to the problem of air pollution at a cost to themselves.

In an exploratory study on subjective and objective quality of life indicators, Nontarsk and Frese (1978) used three indices: objective family quality of life included socio-economic status, level of living scale, etc.; subjective family quality of life indicators were based on the head of household's level of satisfaction with such things as residence, income, etc; and a third index was based on the householder's perception of changes in economic opportunities in the county and in government services. They found 'mild positive correlation' between the objective and subjective family quality of life indicators, and between the subjective family quality of life indicators and the county indicators. However, there was no correlation between the objective family quality of life indicators and the subjective county indicators. Nontrask and Frese suggested that due to the lack of strong correlation, it is not advisable to substitute one set of indicators for another.

Development and Selection of Indicators

Despite the concerns discussed above, the use of indicators in planning and evaluation represent a valuable tool for most community-based educational and other human service related agencies. From this review of literature, one may conclude that the general concept of indicator as a way of thinking can be readily accepted and understood. Indicators have the advantage of being an inexpensive source of information, particularly those available through public

documents such as the census. In many cases, indicators are now standardized, as in health statistics. There is a wide variety of lists of indicators in the literature, particularly relating to quality of life, education, health, etc. Many indicators are true time-series, collected regularly over time.

After interviewing key volunteers as to what information would be useful to them, Carter (1977) proposed the following criteria for indicator selection:

1. is the indicator identified as being useful for planning by any of the interviewed decision-makers?

2. is the indicator frequently mentioned in other social reports?

3. does the indicator seem to possess face validity, i.e., does it measure the general concept it purports to measure?

4. are the data for the indicator available at the appropriate geographical level?

5. are the data timely?

6. can the data be portrayed in a time-series of at least two periods?

Carter described a three-part system of needs assessment that uses social indicators as the starting point, suggesting that social indicators be selected through the key informant approach of interviewing key decision-makers and other influential people in the community. He proposed that key informants be asked what do you want to know? What are your concerns (for example, about health), and what do

you need to know about your community to help you assess or decide whether a need exists?

Steele (1977) also noted the importance of determining how the citizens in a community define the variables (indicators), and cited the need to recognize the community's own reality. This emphasis on citizen involvement in developing indicators is of interest, as several sources, including Milord (1976), noted that one may use indicators without ever involving people.

In discussing the development of indicators of educational outcomes, Collazo (1976) proposed the following process: select indicators from reports of assessment of educational needs and a review of the literature. Then, have a panel of judges review and add to the list. Then, reduce the list by using these criteria: quality and appropriateness of the data gathering procedures; ease and cost of collecting information; probability of public acceptance of the significance of the indicator and the importance of the goal associated with the indicator.

Weiss (1972), among other writers, stressed the need to use several judges for reliability when reviewing indicators and the inclusion of outsiders (as opposed to staff) in rating indicators that are based on subjective, rather than objective, data. de Neufville (1975) suggested that where possible, indicators of success (used in evaluation) should be based on multiple measurement, as well as multiple modes

of data gathering. This may be particularly important when indicators are derived, rather than based on a standard.

Ward (1977) suggested reviewing the legislative history of public policies, policy statements of funding sources, past experience with programs and professional standards as sources of indicators. Several writers (Franklin and Thrasher, 1976; Allen, 1978) suggested the Delphi technique, as useful in developing indicators.

Many of the works listed as references contain extensive lists of indicators. At the very least, they can be used as a starting point for processes of development, a source for selection and as a resource for additional indexes. The user of indicators faces a problem of making appropriate choices from among the possibilities.

The community adult educator needs to ask the question, "Who needs to know what according to whom?" before starting to use indicators in planning or evaluation. In many cases, the best source of the 'what' is the 'who.' Finding direct and indirect ways to learn what decision makers and the public want and need to know about needs, programs, and outcomes is probably equally as important as reliable and valid indicators.

Summary of the Review of Indicators

The domain of social indicators includes almost every field in the social sciences, as well as the natural sciences. Social indicators are closely allied with social

impacts and with policy formation. The diversity of definitions and use of indicators have provided an opportunity to analyze the inter-relationships of an increasingly complex society, the provision of government social services, and the goals of the country. Indicators can be used in micro and macro situations; they can be simple or complex.

Social indicators challenge the educator to ask questions such as why this program, what are the needs, what are the goals, the intended outcomes, and how will it be known if goals and objectives are achieved? Social indicators also provide, at the very least, a starting point toward answering such questions.

Quality in Higher Education

Because of the apparent paucity of literature specific to quality issues in adult education, the researcher examined the broader field of higher education for indicators of quality which could be considered for adaptation or modification as indicators of quality for adult education.

Overview

Quality in higher education in the United States was first addressed when Governor Thomas Jefferson of Virginia proposed to upgrade the curriculum at the College of William and Mary where European standards of quality were not applicable. By the early Twentieth Century, education leaders had formed associations, the College Entrance Examination

Board was founded, and the directions for accreditation were set. A study of quality in medical schools was made in 1910, and studies rating quality in graduate schools were made as early as 1924 and 1934 (Stauffer, 1981). All of these developments, at one point or another, considered characteristics or indicators of quality in their deliberations.

Today, national commissions organized by Congress, major professional organizations and private foundations continually review and project the status of education in the United States. The Carnegie Commission on Higher Education had issued over 60 reports and 20 technical papers by the early seventies (Allen, 1973). Through the media, public attention is focused on test scores, cost per pupil, and availability of technology, for example, as indicators of quality in education.

Assessing quality. What does quality mean in higher education? In answer to that question, Levine (1982) stated that historically, quality meant excellence. Thus quality implied a single standard, or an absolute. Today, Levine postulated, quality is a relative phenomenon, and there is recognition of diverse standards for quality. Stauffer (1982) acknowledged this diversity when he noted that alternative definitions of quality must be developed for different institutional settings.

Several factors make quality a prime concern today, according to Levine. One is a growing sense of cultural

confusion. People no longer identify progress in terms of growth. More frequently, small is preferred. Levine further noted that the meaning of quality has become clouded, that it is defined in different, often inconsistent, even conflicting terms.

In higher education, the concept of quality is often used interchangeably with the concept of effectiveness, according to Cameron (1982). George (1982) suggested that the most common view of academic quality is one that could be considered mystical, in which "academics are the priesthood, the keepers of the secrets of the god Quality, none of which can be revealed to the laity" (p. 46). George also equated quality with reputation and satisfactory achievement of objectives.

Studies of quality have used such indices as student selectivity of institutions, based on the college preferences of the highest scoring six percent of those taking the National Merit Scholarship examination; peer ratings of the quality of graduate departments; employment opportunities of graduates; number of prestigious awards received by an institution's faculty; amount of resources available; and accreditation status (Allen, 1973; Meeth, 1974; Astin and Solomon, 1979; Solomon, 1981).

However, as Astin and Solomon (1979) pointed out, such studies have been criticized for a number of methodological reasons, including the 'halo' effect resulting from institutions that continually appear at the top of the lists.

Webster (1981) categorized the methods of assessing quality into six types. These are reputational rankings, based on the opinions of experts, who rank institutions on their scholarship; faculty awards, honors and prizes; and finally, citations in citation indexes. Students' achievements in later life, scores of entering students on standardized tests, and institutional academic resources are also major categories.

Not all indicators of quality in higher education have been derived from studies; some have been identified as standards of accreditation; others have resulted from the experience of a particular educator. Regardless of the source, indicators of quality in higher education are similar, falling into distinct themes, or an expansion of Webster's six types. These themes are summarized below.

Mission. An institution's mission is what gives it purpose and direction. Stauffer (1982) listed a clear statement of mission, and institutional integrity among indicators of quality, while Levine (1982) stated that an element of curriculum excellence is compatibility with [the] mission and tradition of the college. The institution's will to excellence is also important, according to George (1982). Chambers (1982) related not only the institution's mission with its goals and objectives, but how well its program and curricula fulfill the goals and objectives. According to Kauffman (1984), the relationship of an institution's stated mission, goals, and program to its student

clientele, as well as reality-based goal statements, are central to quality.

Curriculum. The plan for studies is an important element in assessing quality. A well-planned curriculum, approved by the school's board, strong graduation requirements, and academic offerings that go beyond the basics are indicators of quality according to Stuart (1983). Kowalski-Firestone (1982) suggested that the relationship of the curriculum to the program's educational objectives and the contribution of the program to the mission should be part of a review of quality. Levine (1982) included an examination of the rigor of the academic work in his measure of quality. He also believed that quality is reflected by programs that are up-to-date, complete, coherent and commensurate with accepted standards of baccalaureate study. Standards are frequently identified as indicators of quality in higher education. For example, Stauffer (1982) cited high standards, and Kirk (1981) suggested that standards and educational goals be harmonious with the needs of the institution's clientele.

Instructional design. Following closely with curriculum is how that curriculum is carried out, or the design of instruction. Among indicators of quality are course content that is appropriate for the educational level and needs of the target group (Kirk, 1981) and methodology of teaching (George, 1982). Other factors are openness to innovation, experimentation and future growth (Chambers,

1982), and an instructional design that facilitates competency development and supports major concepts presented (Reece and Braden, 1982).

Faculty and staff. One area of emphasis in the literature related to quality in higher education clearly centers on faculty. Stuart (1983) suggested that quality begins with a solid gold faculty, as judged by their major subjects and grade point averages in college. Other indicators identified include: leadership within the program (Kowalski-Firestone, 1982); respect of learners and colleagues (Kirk, 1981) and scholarly and professional achievements (Solomon and Astin, 1981). Kauffman (1984) listed three indicators of quality which are more subjective: morale of staff and faculty, their attitude toward the overall institutional environment, and their attitude toward the nature of the curriculum. Stauffer (1982) suggested that both achievement and satisfaction of faculty and adminstration are to be considered in assessing quality. Another dimension of faculty quality is professional growth (Reagan, 1983).

Faculty and staff competencies. The quality of higher education is grounded in the competencies of the institutions' faculties. Characteristic of a quality faculty are their skills as teachers, according to many observers of higher education. For example, Reece and Braden (1982) asked whether instructors have been trained to be effective teachers; Kirk (1981) expected the instructor to possess the skills to clearly explain ideas and concepts, while Solomon

and Astin (1981) valued faculty commitment to undergraduate teaching. Kirk also suggested that instructors can be qualified through education and/or experience. Levine (1982) specified that faculty members teaching in baccalaureate programs should have appropriate training and should teach in an area of expertise. He further stated that the college undergraduate curriculum should be consistent with the training and interests of its faculty. Additionally, Chambers (1982) recommended assessing the administrative organization for facilitating teaching and learning as a measure of quality.

Outputs. Outputs, or products, are a major indicator of quality according to Green in Brown and Copeland (1979). Specific output indicators are frequently used in comparing institutional quality. Among them are: record of student achievement, particularly in basic competencies (Stuart, 1983, 1982); professional accomplishments of graduates (George, 1982); total bachelor's degrees (Solomon and Astin, 1981); and students' intellectual and career developments (Stauffer, 1982). Both Stauffer (1982) and George (1982) used the economic indicator concept of value added as a quality indicator, as in value added to students' lives. Reagan (1983) added outstanding educational progress as an output. And, Chambers (1982) put equal weight on two dimensions of outcomes: outcomes to be achieved, or aspirations, and outcomes achieved, or current effectiveness.

Evaluation. Another major area for determining quality in higher education is the attention and follow-through given to evaluation. Kirk (1981) devoted considerable attention to identifying a quality process of evaluation. He set the following five standards for evaluation:

1. the evaluation method is clearly outlined and described;
2. the evaluation is appropriate and reflects adequate standards;
3. the evaluation measures behavioral objectives and significant course factors;
4. the evaluation tool is clear, easy to use;
5. the evaluation provides for learner input and review.

Kirk further noted that various feedback mechanisms also serve a quality dimension of assuring learner knowledge of progress, communication, and free exchange of ideas.

The importance of participant involvement in evaluation was also noted by Kauffman (1984) who suggested that regular student evaluation of teachers is important. The evaluation of research and publications only in terms of quality and contributions to their fields, [rather than quantity] is important in assessing quality according to Stauffer (1982).

Kauffman (1984) proposed several indicators of quality relating to the institution's performance. For example, does the institution attempt to assess how much students actually learn in their courses; what is the ability of the institution to retrieve and monitor information about its

students; and does the institution understand student perceptions of the learning environment and campus value?

Relationships. The nature of the numerous interactions that occur between and among the faculty, administration and students is another issue in the appraisal of quality. Stuart (1983) noted that a principal who cares is an important relationship, and Stauffer (1982) believed that the adminstration should encourage interaction between new students and faculty. Kowalski-Firestone (1982) also focused on faculty-student relationships when she cited joint faculty-student extra curricular activities as a factor in quality. The availability of faculty members to students outside class (Levine, 1982) and the provision of special help to students when needed (Stauffer, 1982) should be considered when assessing quality.

Other quality dimensions of relationships noted in the literature were that faculty members should meet scheduled classes and come to class prepared (Levine, 1982) and teachers should 'go the second mile' (Reagan, 1983).

Resources. In gauging quality, some observers included an institution's financial and other resources on the list of indicators. For example, Stuart (1983) equated high per pupil expenditures with quality. Kirk (1981), George (1982) and Kauffman (1984) spoke to the availability and adequacy of financial resources. Chambers (1982) cited library and other learning resources, including computing's role in meeting published objectives; Stuart (1983) mentioned a

superior library and media program; and according to Kirk (1981), modern technology is used where productive and appropriate.

Other types of resources enumerated were: attractive campus (Stuart, 1983); educational environment conducive to sound learning and instruction (Kirk, 1981); supportive planning, budgeting and accounting policies and practices (Chambers, 1982).

Levine (1982) believed that quality is indicated by a program that is consistent with the resources available to the institution; such resources include staff, facilities and money.

Image. One of the early indicators of quality of undergraduate programs was the image of the institution held by prospective students and their parents. What makes up the image? According to Brown and Copeland (1979) the vitality of the program was an indicator of quality, and to Stuart (1983), a positive school climate. Levine (1982) and Chambers (1982) both commented on a college's effort to communicate its image to the public as a quality measure. Levine stated that institutional advertising and admissions literature, such as the college catalog, should be complete, up-to-date, and understandable. Chambers noted that the general public relations posture, including its catalog and other publications, was an important indication of quality.

Size and ratios. The size of a program, and the number of students were often mentioned as factors in determining

quality in higher education. Low pupil-teacher ratios (Stuart, 1983); weighted and unweighted class size ratios, and equivalent full-time students (Stauffer, 1982) were ways to distinguish levels of quality. Reece and Braden (1982) suggested a converse as an indicator of quality--that instructional programs have sufficient enrollment.

Satisfaction. Satisfied learners were one indicator of quality according to Votruba (1981). Sharing this view were Stauffer (1982), who cited levels of satisfaction, and George (1982) who mentioned satisfaction of students. Reece and Braden (1982) were more specific about satisfaction when they stated that instructional programs should meet the needs and expectations of client groups and that the program should be viewed as effective by a majority of enrollees who complete it. Similar indicators were reported by Stuart (1983) and by Kauffman (1984) when they listed good attendance and low drop-out rate, and high retention, respectively. Solomon and Astin, 1981) cited popularity among high ability students.

External aspects. The extent to which the institution involves those external to it is a measure of quality included in some lists of criteria. Stauffer (1982) listed contribution to communities served; Kirk (1981) approached community by assessing how the institution utilizes community resources to improve instruction. Chambers (1982) and Stauffer (1982) both believed that the governing board and a

strong lay advisory board, are crucial to institutional quality, and Kauffman (1984) stressed alumni support.

Specific Studies of the Perception of Quality in Higher Education

Pavesic (1981) studied the "Perceptions of Academic Administrators in the State University System of Florida on the Importance of Selected Components of Quality in Higher Education." After a review of the literature, he grouped 40 components of quality into four major categories: faculty, student, institutional, and program components. Academic administrators in the nine state universities in Florida rated the components on a scale ranging from little importance to essential. The results displayed greater similarities than differences across three classifications of administrators, with no components being rated of little importance.

Also in Florida, Rathburn (1982) investigated the "Information Perceived as Useful for Program Quality-Evaluation Decision Making by Administrators in Florida Community Colleges." Like Pavesic, Rathburn used the literature to begin development of a survey instrument. However, Rathburn had a panel of experienced community college management information specialists and institutional researchers review the proposed list of program characteristics. After this review, a list of 434 program characteristics was finalized and sent to administrators at Florida's community colleges.

Over 450 community college administrators responded, and rated 108 of the program characteristics as highly useful in decision making. These were clustered into four categories: faculty/staff, costs/resources, students, and general information. There were differences depending on the program area of the administrator. Rathburn concluded that a multiple component approach is recommended for program quality-evaluation decision making.

Summary of Quality in Higher Education

As has been shown, a number of indicators exist for assessing quality in higher education. Derived from a number of sources, they fall into several clusters or themes: mission; curriculum; instructional design; faculty and staff; faculty and staff competencies; outputs; evaluation; relationships; resources; image; size and ratios; satisfaction, and external aspects. Accreditation standards and reports formed the primary foundation for many of the indicators, which may also be termed measures, components, and characteristics.

Quality in Adult Education

A review of selected key works of adult education literature (Knowles, 1960; Rauch, 1972; Harrington, 1977; Knox, 1977; Langerman, 1979; Boone, 1980; and Apps, 1985), provided little specific discussion on the topic of quality of adult education. While there was an overall emphasis on

understanding the philosophies, theories, and practices of adult education, the issue of quality was approached only indirectly under the umbrella of program improvement. For example, case studies and alternative methods were frequently used to offer adult education practitioners opportunities for comparison with their own programs.

Some texts focused on evaluation methodologies, with one stated purpose being program improvement. Apps (1985) focused on a critical examination of current practice as a foundation for improving future planning in continuing or adult education. He stated that the basis for decision-making are our basic beliefs, such as our beliefs about adult learners. One such belief held by some adult educators, according to Apps, was "Quality must come before quantity. Educational programs must first focus on quality, then on promotion" (p. 98). Unfortunately, Apps did not continue the discussion of quality, except to note that continuing education programs that are part of higher education face competition not only from other providers, but from their own institution, that sees them in conflict with "the primary thrust of higher education--educating the full-time degree-seeking student" (p. 201). Apps contends that this conflict is because such programs as Extension and continuing education are often equated with those programs "deemed to be of low quality" (p. 202).

There is some discussion of the marginality of adult education, both within the higher education system and in

terms of support from the federal government. Among other reasons, this marginality may occur because of the lack of information about the quality of adult education programs. A computer search of the ERIC system produced fewer than ten citations on the key word "quality;" the reports retrieved tended to be evaluation studies of non-formal education in third world countries, and not directly studies of quality. A similar search of dissertation abstracts did not yield any research on quality of adult education. However, it should be noted that the key word process for such searches is dependent on those words used originally to classify a document. As will be seen below, two dissertations were located through other means which focused on quality issues in a specific adult education program.

A Review and Analysis of Three Specific Studies of Quality in Cooperative Extension

This section reviews and analyzes three studies of quality in a specific adult education organization--Cooperative Extension. The first study, conducted by Young and Cunningham, faculty members at the Ohio State University in 1977, is the basis for the second two research projects. For ease of identification, the studies are referred to by the name of the state in which they were conducted.

The Ohio Study

Young and Cunningham conducted a study entitled "Extension Output Measures as Identified by Extension Clientele"

with two objectives. The first was long range: "to identify, as perceived by clientele, the concrete evidences they accept as demonstrating Extension program accomplishment." The second objective was more immediate: "to create and test a technique for obtaining from Extension clientele, valid output measures of an Extension program."

The study consisted of three phases. First, open-ended interviews were conducted with 48 people connected with the agricultural aspect of Cooperative Extension. The respondent was first asked to rate Cooperative Extension's efforts in their county, and then to cite the factors that they considered in rating the program.

In the second phase of the study, 166 of 248 users of Cooperative Extension's agricultural programs responded to a mailed survey of 44 items derived from the interviews by expert judges. Participants were asked to "rate the importance of each item as a measure of the quality of Extension agricultural programs." Analysis of the responses revealed four factors: information, agent, method, and program. Only two of the items scored below 3.00 on a five-point importance scale, and the remaining items were rated moderately important or greater.

The third phase of the study used the survey from phase two to have agricultural clientele rate specific county Cooperative Extension agricultural programs. Concurrently, the same counties were rated by agricultural professionals using a paired comparison process.

The researchers concluded that the objectives of the study were successfully reached. A process and an instrument were developed and used. Clientele identified output measures that they used in evaluating Cooperative Extension programs.

Analysis of the Ohio Study. The study was limited to agricultural clientele, which is only one program area of Cooperative Extension. How Cooperative Extension clientele who participate primarily in Home Economics, Community Resource Development, 4-H and/or the Expanded Food and Nutrition Programs would respond was not addressed. Since demographic data were not collected, variables such as age, size or nature of the respondent's agricultural enterprise were not known, nor their influence on how people responded. Also, no data were collected on the level of respondents' participation in Cooperative Extension programs, activities, use of media (newsletters, etc.) or requests for assistance.

The researchers acknowledged procedural difficulties with the clientele aspect of phase three, in which it became impossible to identify the county of 29 respondents. In addition, identifiable responses for this component of the study ranged from 22 percent in one county to 52 percent in another.

Although the researchers recommended that the instrument be used as a device for measuring the quality of county agricultural programs, the originally stated purpose of the study was to identify output measures. Other words used to

describe the project were "output effectiveness" and "evidence of program accomplishment"; the word quality was not mentioned. While the literature does include outputs and accomplishments as indicators of quality, it is unclear whether the researchers intended to assess quality when they began the study.

Further, the initial face-to-face interview schedule did not directly include the word quality. Respondents were asked "to rate a specific county agricultural Extension program, in meeting needs . . . relative to the agricultural industry." Probing questions asked about factors considered in choosing the rating, and what were the most important factors to use in showing whether or not Extension was meeting needs.

It is unclear from a summary report and from the project's final report whether the instructions to the respondents in the second phase of the study included the word quality. The summary report stated "to rate <u>how important</u> each of the 44 items from the first phase of the study was as a measure of the county's agricultural program" (Young and Cunningham, 1977a, p. 6). The final report, when describing the same instrument, states "rate the importance of each item as a measure of the quality of Extension agricultural programs."

Finally, in the third stage of the project, clientele respondents were asked to "honestly evaluate your county's total agricultural program." Neither the cover letter, the

survey instructions, nor the directions on the instrument itself contained the word quality.

While the project's results are a major contribution to the field, the question can be posed as to what difference, if any, consistent use of the word quality in all phases of the study would have made in the results. Would the introduction of a word which according to Pirsig (1974), everyone sees differently, provide a different conceptual universe for each respondent?

The Pennsylvania Study

Kantner (1980) focused his dissertation on "An Assessment of Extension Agricultural Programs as Perceived by Extension Clientele." Basing his research on the Young and Cunningham Study, Kantner expanded the population of the study to Cooperative Extension agents, county executive committee members, and assistant directors of Cooperative Extension, in addition to users [clientele] of Extension agricultural programs, the primary population in the Ohio Study.

Using the original 44 item instrument developed by Young and Cunningham, Kantner found that 13 of the statements were rated differently by the four groups, at the .05 level of confidence. The greatest difference was between the agent and the client. Kantner correlated a number of variables with responses, finding that a positive relationship existed between those clientele who attended

Cooperative Extension educational meetings and their response. The more meetings attended, the more their perception improved of the quality of Extension programs.

Income of clientele did not show a relationship to responses, although age did.

Analysis of the Pennsylvania Study. Although Kantner expanded the population of the study, he still limited the focus to agriculture. He attempted to assess the quality of agricultural programs directly, by asking respondents to express their evaluation of a variety of elements of the program. The number of administrators was very small--a sample of two. Fifteen county agents constituted the agent sample.

The Missouri Study

In 1983, Abdel-Rehim studied "Clientele and Council Officers Perceptions of the Missouri Agricultural Extension Service" as his dissertation topic. The population for the study included 80 officers of county Extension councils, 40 from rural counties and an equal number from counties identified as urban, as well as 240 clientele. The clientele, 12 per county, were hand picked based on being active in Cooperative Extension, and being well respected in their communities. The instrument developed by Young and Cunningham was the basis for a similar instrument used by Abdel-Rehim. He changed the wording of some of the statements, primarily by modifying the order of words, or by

substituting the phrase 'agricultural specialist' for the word 'agent' as used by Young and Cunningham.

Also, Abdel-Rehim altered the directions on the instrument by asking the respondents to ". . . express your judgment regarding the quality of the total Agricultural Extension Program in your county" (p. 92). In general, Extension Council Officers (ECO) and clientele had positive perceptions of the program. Clientele had lower perceptions than ECOs concerning experience and background of area agriculture specialists in urban counties. Two different age groups of clientele had different perceptions than ECOs under age 35 regarding the number of meetings held.

Other findings included a significant difference between council officers and clientele on their perceptions of the accuracy of information, quality of publications, Cooperative Extension as a source of new information and methods, and as a good source of quality information and help. Extension clientele had significantly lower perceptions than did ECOs pertaining to experience and background of area agricultural specialists in urban areas.

Analysis of the Missouri Study. As did the first two studies, the Missouri Study focused on the agricultural component of the county Cooperative Extension program. This focus appeared somewhat inconsistent with the urban sample used in the study. The instrument asked the respondent to check those Cooperative Extension agricultural specialists with whom they had had contact. It would seem that the

level of contact that an urban resident would have with a Livestock Specialist or a Dairy Specialist would be limited. The study did not comment on this aspect of the study.

Nor did it offer any analysis, or propose any reasons for differences in perception between clientele and ECOs. For example, it would be worth consideration to suggest that ECOs have a logical reason to know more about a specialist's experience and background credentials than clientele, as ECOs are often involved in the hiring of staff. Other variables, such as number of meetings attended, are not fully defined.

Finally, it should be noted that the Missouri Study asked participants to actually rate the county program. This study did not attempt to assess each county's rating as compared to the other counties, as did the third stage of the Ohio Study. Since county programs are highly variable in content, staffing, clientele and methodology, these difference may confound ratings when the ratings are aggregated.

Summary of Extension Studies

Each of the three studies used the same instrument to measure the Cooperative Extension agricultural program at the county level in three different states. In two of the studies, respondents included staff and members of clientele committees, in addition to clientele. The method employed by Cunningham followed several of the suggested techniques

for identification of indicators, namely interviews with key informants, and using a panel of expert judges. Although quality was not initially the focus of the studies, the measures used were the equivalent of indicators.

Chapter Summary

The literature has provided comprehensive information on the concept of indicators as a frame of reference for the more precise concerns of this study. Although also termed measures, components or characteristics, indicators offer a point of departure for developing an operational definition of the elusive concept of quality. An examination of quality issues in higher education revealed a considerable number of indicators consistently identified in accreditation studies, in reputational comparisons of institutions, and in studies of quality.

The literature addressing specific indicators of quality in adult education appeared to be very limited. However, the higher education indicators appeared to hold promise as proxies for adult education indicators. Three related studies which dealt indirectly with quality issues in Cooperative Extension were reviewed, and provided further direction for this study.

CHAPTER III

STUDY DESIGN AND METHODOLOGY

The purpose of the present chapter is to describe the design of the study, to identify the study population, to describe the development of the instruments, and to describe the process of data collection and treatment.

Overview of Study Design

This study was based, in part, on the procedures developed by Young and Cunningham (1977a & b). In that study, the researchers conducted face-to-face, minimally structured interviews with Ohio Cooperative Extension clientele to gain measures of output. A questionnaire was developed after the results were reviewed by a panel of expert judges. This instrument was then used to gain the perception of clientele regarding the importance of each item in assessing the Cooperative Extension agricultural program.

In the current study, the Ohio procedure was adapted in the following ways: first, the interviews were conducted both individually and in two types of group settings; second, interviews were not limited to those connected with the agricultural program; and third, the purpose of the interview was specifically stated as an investigation into indicators of quality.

The design of this stage of the study was supported by the literature which suggested that one method of developing indicators is interviewing key informants (Carter, 1977) and determining how the citizens in a community define the variables, i.e., indicators (Steele, 1977).

The second stage or phase of the study consisted of a review by a panel of experts in the field of adult education of the transcribed interviews to identify the indicators, as well as a review of the literature to further identify indicators of quality. This approach was supported by Weiss (1972) and Collazo (1976) who proposed that one select indicators from reports of the assessment of educational needs, followed by a review by a panel of judges, and a comparison with a review of the pertinent literature.

The third phase of the study was similar to that in the Ohio Study. Through a mail questionnaire, clientele were asked for their assessment of the importance of each indicator identified or developed in phase two. Going beyond the Ohio Study, this investigation also sought the opinion of key volunteers and professional staff on the importance of the indicators.

The Sample

The sample for this study was drawn from participants or clientele, staff, and key volunteers of Cooperative Extension in the states of Massachusetts and New York. For the first part of the study, interviews were conducted with

17 people in Albany County, New York, and with eight people in Massachusetts. In total, the 25 represented ten staff, seven participants, and eight key volunteers. Most key volunteers were also currently, or had been, participants.

The New York interviewees were those who responded to an invitation to participate in a dinner meeting extended on the behalf of the researcher by the county director of Albany County Cooperative Extension. Those receiving the invitation were key participants, key volunteers who comprised the county executive committee, and professional staff. Albany County is similar to many Massachusetts counties in having a similar mix of urban, suburban, and rural characteristics; the number of Cooperative Extension staff; and direction of educational programming. Prior to the dinner meeting, the researcher had not met any of those present, other than the county director.

The researcher knew those individuals interviewed in Massachusetts. Key volunteers were drawn primarily from the state-wide Massachusetts Extension Advisory Council. Staff referred clientele. The primary criterion for selection was an ability to be conversant, to be able to think aloud. This was, of course, a subjective judgment. However, this was counterbalanced by the diversity of the backgrounds of the interviewees, including a senior citizen, a working mother with college age children, a vocational school teacher, a staff member with fewer than two years

experience, and a staff member with more than ten years tenure with Cooperative Extension.

The client population for the third stage of the study was drawn from six of 14 Massachusetts counties. Two counties were located in the northeastern section of the state, one centrally, one in the southeastern section and two are Western in location. This provided a geographically distributed population base. All six counties are considered as non-rural based on census data, although all six counties include some towns that, based on population alone, would be considered rural.

Each county Cooperative Extension office maintains a variety of mailing lists which are used to disseminate announcements of meetings and workshops and to distribute newsletters and other publications. These are typically organized by program area: Agriculture, Home Economics, 4-H, and Community Development. Within each of these primary areas there may be further specificity. For example, within Agriculture, there may be distinct mailing lists for dairy farmers, landscapers, home gardeners, and vegetable growers, among others.

Due to organizational regulations governing the distribution of mailing lists, the Associate Director of Cooperative Extension notified local administrators in the selected counties that the study was in the interest of Cooperative Extension, and that the provision of names to

the researcher, as a member of the administrative staff was appropriate.

The head clerk in each of the six county offices was requested to draw a total of 100 names per county, or 25 per list from lists representing Agriculture, Home Economics, 4-H, and Community Development. The total number on each list was divided by 25, to achieve n. Then every nth name was selected, based on a random start, to achieve 25 names per list or 100 per county, for a total sample of 600. This procedure is known as systematic sampling, which according to Sudman (1976), behaves as does a simple random sample, and has the same precision in almost all cases of interest involving people.

The decision to use a sample size of 600 was based on past experience with mailed questionnaires to Cooperative Extension clientele in Massachusetts. The typical response rate for needs assessment and evaluation oriented surveys has usually been under 50%. In a major survey with a sample size of 6,000, Fetterman (1984) achieved a response rate of 25%, using Cooperative Extension mailing lists. The researcher believes that this low response has been due in a large part to the general nature of such surveys; they are often not specific enough to generate an energetic response by the clientele, nor has the typical Extension participant had an in-depth experience with Extension that provides the basis for in-depth feedback. According to Sudman and Bradburn (1986) this is known as salience. The more salient

the topic is to the potential respondent, the more likely he/she will be to respond. It can be postulated that a survey on the importance of certain statements as indicators of quality will be less salient to clientele than to staff or key volunteers. Accordingly, to achieve a response rate that would allow for satisfactory analysis, it was estimated that a 20-25% response rate would need to occur. It was projected that 100 to 150 responses would constitute an adequate number for this part of the study. To achieve this, the starting population would need to be 600.

The total population of professional staff at the county level was included, for a total of 114 staff. A response rate of 75% was postulated.

By state statute, a seven or nine-member unpaid Board of Trustees oversees the work of Cooperative Extension in each county. The members are appointed by the County Commissioners and are acknowledged as key volunteers within the Cooperative Extension system. All members of the Boards of Trustees in all 14 counties, or a total of 126 people, constituted the key volunteer sample. A response rate of less than 60 percent was projected, due in part to the fact that two boards are relatively inactive at this time.

Phase I Data Collection

The first phase of the study consisted of face-to-face interviews conducted by the researcher in Massachusetts and New York. The interview process was unstructured, with the

opening question being, "What, to you, indicates quality in Cooperative Extension and in Cooperative Extension programs?" Probing questions, such as, "Can you explain that further?", "Can you give an example of what you mean?" and statements such as, "Am I correct in stating that you mean _____?" were used to continue and clarify the interviewee's comments.

All interviews were conducted in confidence. Four interviews were conducted one-on-one. One interview was conducted with a group of four, that is, when several people were initially hesitant about their ability to respond, the researcher made an on-the-spot decision to conduct the interview with all four people as a group. A third method of gaining direct input was a large group interview with 17 people. Due to the time-consuming nature of arranging one-to-one interviews, it was decided to consider a group interview. The technique used was based on the nominal group process (Delberg, 1975) in which the question is posed to the group, and each person writes out his/her response in confidence. Then, each person contributes an answer, until all answers are listed before the group. Finally, the group studies the list to ascertain if the list is complete, contributing additional items stimulated by those already listed. This process increases participation and reduces the likelihood that one or two individuals will dominate the discussion.

After a group dinner at the restaurant hosted by the researcher, the New York group was asked to list as many indicators of quality relating to Cooperative Extension and its programs as they could generate without discussion. Paper and pencils were provided. When everyone had indicated that they had completed the assignment, each person in turn was asked to state aloud one indicator, until everyone had exhausted his/her list. As people spoke, the indicator was listed on newsprint attached to the walls of the room. After all indicators were listed, the group was asked to study the list, and suggest indicators that might have been overlooked. Two additional indicators were added.

The researcher then collected the individual worksheets and the newsprint. The researcher then thanked the group, after which it adjourned.

Each one-to-one interview and the small-group interview was tape recorded and then transcribed verbatim via a word processor. The results were edited by the researcher to exclude any clues as to the name of the respondent, as well as the 'polite dialogue' that is naturally a part of such interviews.

The lists developed by the New York group were transferred to the word processor file, and were not edited by the researcher other than to correct typographical errors and misspelled words.

Phase II Data Collection

The results of Phase I were then reproduced as hardcopy and mailed to each of three adult educators who had agreed to serve as expert judges. The judges were selected for their experience in adult education, both with Cooperative Extension and with other programs. All three judges were currently working in a University setting. All three had completed graduate work at the doctoral level in adult education. They were instructed to either circle, or mark with a highlighter, those words or phrases that they considered indicators of quality. A postage-paid, envelope addressed to the researcher was also enclosed to facilitate return. Credentials of the judges are in Appendix A.

Instrument Development

All three expert judges returned the interviews, either underlining, circling, or highlighting words or phrases that appeared, in their opinion, to be indicators of quality. These were transcribed by the researcher to a computer file for each judge. The results were computer printed on index cards. Each card included a notation as to which judge had identified the word or phrase. In the majority of cases, two of three judges identified the same item. The index cards were manually sorted by the researcher into categories. A first sort was made based on the categories used in the Ohio Study: information, agent, method, and program.

This sort resulted in more than one-third of the cards not clearly fitting into one category or fitting into more than one category.

A second sort was made using an evaluation model widely used in Cooperative Extension, Bennett's Hierarchy. This model is based on seven categories of criteria for evaluating Cooperative Extension programs, and according to Bennett (1975) reflect a seven-link chain of events. Additionally, the model or hierarchy offers guidance in selecting evidence to document each level.

Bennett described the sequence of events as follows:

> First in the chain is inputs, the resources expended by Extension. These inputs produce activities that involve people who have reactions, pro and con. People involved may change their knowledge, attitudes, skills, and aspirations. (KASA). Practice change occurs when people apply their KASA change to working and living. What follows from these practice changes are end results. Such results should include accomplishing ultimate aims of the Extension program (p. 7).

These seven links are shown as a hierarchy below:

7. End Results

6. Practice Change

5. KASA Change

4. Reactions

3. People Involvement

2. Activities

1. Inputs

The indicators identified by the panel of judges were manually sorted by the researcher into these seven categor-

ies, where it appeared that there was a better fit with less ambiguity over categories than the attempt to classify by the Ohio categories. In other words, placement of the indicators was more direct, with less hesitation occurring. This sort resulted in 65 statements. A comparison of these statements with those resulting from the Ohio Study, as well as those noted in the review of literature resulted nine statements being added for a total of 74 statements. These were arranged in order of Bennett's Hierarchy.

Further study revealed that some statements duplicated others in concept. Elimination of duplicates resulted in a final draft of 59 questions. The instrument was then pre-tested with six people. Follow-up discussion with each person confirmed that one question was not clear in meaning. That question was dropped, leaving a total of 58 statements as potential indicators of quality.

Instrument Format

Based on suggestions by Dillman (1978) and Sudman and Bradburn (1986), attention was paid to the format and appearance of the questionnaire. The questionnaire was prepared on a word processor, a master copy laser printed and three versions printed by offset. Version one for participants (Appendix B) was printed on white paper with blue ink; version two for key volunteers (Appendix C) was printed on ivory paper with blue ink. Four demographic

variables focusing on frequency of interaction with Cooperative Extension were identical for both versions one and two.

A third version for staff (Appendix D), with demographic variables relating to length of tenure with Cooperative Extension and programmatic responsibilities, was printed on white paper in blue ink. All three versions were printed in booklet format, on 11 x 17 inch paper folded to 8 1/2 x 11 inches. Each questionnaire was sequentially numbered by using an automatic handstamper, in the upper right hand corner of the first page, which corresponded to a numbered master list.

A basic cover letter was adapted for each of the three groups, and reproduced on formal Cooperative Extension/ University of Massachusetts letterhead. Each letter was individually signed in blue ink by the researcher. As recommended in various texts, specific mention of the numbering system was made in the cover letter.

A postage-paid, pre-addressed return envelope was included with the cover letter and questionnaire to each person. The delivery envelope had as a return address the University of Massachusetts, rather than the more normal Cooperative Extension return address which is distinctive. This choice of envelopes was made to intrigue the addressee into immediately opening the envelope, rather than identifying it as a Cooperative Extension mailing and setting it aside to be read later. Regular postage stamps, rather than the official government mail permit indicia or postage meter

mark were used to make the envelope more interesting. Due to the size of the mailing, computer labels with the respondent's name and address were used. Quality computer printing was used to avoid an overly computerized appearance.

Two days after the deadline for return of the questionnaire, post cards (Appendix E) were sent to those who had not responded, with an extended deadline to encourage response.

Tabulation and Analysis of Data

Upon receipt of completed questionnaires, the corresponding names on the master list were deleted. Data were entered into microcomputer version 4 of SYSAT, which is an outgrowth of statistical routines developed over a ten year period for mainframe and mini computers. A Zenith 386 microcomputer was used for all processing of data.

Tests performed on the data included Analysis of Variance, and Factor Analysis, as well as compilation of frequencies. All tests were conducted at the .05 level of significance.

CHAPTER IV

SUMMARY AND DISCUSSION OF RESULTS

This chapter presents data concerning characteristics of the respondents by group: users or participants, key volunteers, and staff, as well as selected comparisons among groups. Summary data for each of the 58 proposed indicators of quality are presented, first by combined responses, and second, by group response. Further, comparisons and analysis are made among groups.

Description of the Respondents

Of the 822 surveys mailed, 335 were returned by the extended deadline. In addition, 36 were undeliverable to the addressee for reasons such as no forwarding address. Thus, of the 786 that were delivered, the 335 represented a total response rate of 42.62 percent.

The initial mailing to users was comprised of 582 names. All of the undeliverable mail came from this group, reducing the base number to 546. One hundred and eighty-three responses were received, for a user response rate of 33.51 percent.

Key volunteers, i.e., members of county Boards of Trustees, numbered 126. Of these, 63 returned completed surveys, for a response rate of 50 percent. Of the 114

county staff who were employed at the time of the survey, 89 responded for a response rate of 78.07 percent.

Characteristics of Users and Key Volunteers

Both users and key volunteers were queried on three common items: the frequency of contact that they estimated that they had with Cooperative Extension on a monthly basis, an estimate of the number of years during which they had had contact with Cooperative Extension, and the program area from which they were most likely to receive information. In the discussion and tables that follow, the results are organized by question, with the responses by users and key volunteers described separately, and then compared. In addition, descriptive relationships between the questions for both user and key volunteer are presented.

As Table 1 (page 109) indicates, 36.5 percent of users had contact with Cooperative Extension less than once a month, while 37 percent had contact with Cooperative Extension at least once a month. Just over 20 percent of the respondents reported that they interacted with Cooperative Extension two to five times per month. Contact could take the form of telephone inquiries, receipt of a newsletter, participation in a meeting, etc.

Key volunteers tend to have more frequent monthly contact with Cooperative Extension than users, with nearly 85 percent reporting interaction once a month or more, and almost 20 percent indicating contact more than five times

per month as shown in Table 1. Key volunteers appeared to be twice as likely to contact Extension two or more times a month than users.

In response to the question, "How long do you estimate that you have used Cooperative Extension programs or services?", almost 28 percent of the users indicated more than twenty years. Twenty-two percent reported involvement over a six to ten year time span, and just under twenty percent listed 11 to 20 years. Table 2 (page 109) shows the frequency and the percentage, with just under one-half of the respondents reporting contact of more than ten years, and 11.5 percent reporting less than two years association with Cooperative Extension.

More than 50 percent of the key volunteers responding had been involved with Cooperative Extension more than twenty years, and only four people reported less than two years involvement as detailed in Table 2. Users are twice as likely to have been involved with Cooperative Extension for less than ten years than are key volunteers. During the period covered by this study, Cooperative Extension in Massachusetts functioned programmatically in five areas: Agriculture, Home Economics, 4-H, Community Development and Natural Resources, and Expanded Food and Nutrition Education. With only a few exceptions, all field staff were assigned to one of these areas. Both information dissemination (responding to telephone questions, newsletters) and program delivery (workshops, seminars, meetings) were gener-

ally organized by program area. Clientele interacted with Cooperative Extension within this framework; to many clientele or users, they considered a program area a 'department.'

Table 3 (page 110) shows the program areas from which users and key volunteers reported that they were most likely to receive information and program announcements. The majority (84 percent) of users receive information from the three traditional areas: Agriculture--40 percent, Home Economics--23 percent, and 4-H--19 percent. The small percentage of responses for Community Development and Expanded Food and Nutrition Education is not unusual in light of the fact that these program areas are newer within Cooperative Extension and have fewer staff, and therefore, offer proportionally less programming than other program areas.

Key volunteers from the program areas of Agriculture, Home Economics, and 4-H account for nearly 94 percent of those responding as shown in Table 3. In general, there is considerable similarity between users and key volunteers, although a slightly higher percentage of key volunteers align with Agriculture than do users.

As shown in Table 4, (page 111) frequency of contact by users on a monthly basis ranging from less than once a month to two to five times per month was reported similarly by those associated with Cooperative Extension for six or more

years. Contact with Cooperative Extension once a month was the frequency most often reported across all program areas.

Key volunteers, with their longer association with Cooperative Extension, tended to report more frequent contact with Extension on a monthly basis as number of years increase as seen in Table 5 (page 111). However, this may be due in part to their responsibilities as Board members, particularly attendance at Board meetings.

Table 6 (page 112) shows the relationship of contacts per month to program area association for users. In terms of contacts per month, users associated with Agriculture, Home Economics, CRD/NR, and EFNEP appear to be similar in contact less than once per month with Cooperative Extension. More users associated with 4-H were somewhat more likely to report contact with Cooperative Extension two to five times per month (45 percent) and more than five times per month than those in other program areas.

Key volunteers, as shown in Table 7, (page 112) were more likely to have contact once a month or more, regardless of program area. Those affiliated with Agriculture tended to show the widest range of frequency of contact.

Of users responding, over 50 percent of those associated with Agriculture, Home Economics and 4-H reported contact with Cooperative Extension for 11 or more years. Users of Community Development and the Expanded Food and Nutrition programs were most likely to report association for three to five years. Table 8 (page 113) details the

relationship for users between program area involvement and years of contact with Cooperative Extension.

Years of contact by program area for key volunteers is shown in Table 9 (page 114). While there are differences by program area, 66 to 100 percent of the key volunteers, regardless of program area, have been involved with Cooperative Extension for 11 or more years.

Characteristics of Staff

Less than eight percent of the 88 staff who responded were employed by Cooperative Extension for two years or less, as shown in Table 10 (page 115). The majority of staff have been employed by Cooperative Extension in Massachusetts or in other states for more than three years, with 24 percent for six to ten years. Nearly 15 percent had been employed for more than 20 years.

As indicated in Table 11, (page 115) the majority of staff are assigned to three of the five program areas, with 29.5 percent each in Home Economics and 4-H, and 27.3 percent in Agriculture. Only eight percent of staff are employed in the CRD/NR program area, and just under six percent in the Expanded Food and Nutrition Education program.

A profile of staff by the major of their highest degree is shown in Table 12 (page 116). Almost 23 percent of staff have their highest degree in education, followed by 21 percent of staff who have their highest degree in agricul-

ture. Home Economics was the major for 19 percent of the staff for their highest degree, with 11 percent of the staff reporting that their last degree was in the social sciences. Eight percent of the staff reported that natural sciences was the focus of their most recent degree, as did the same percent for a business degree.

When staff tenure or length of service is compared by program area, the majority of staff in each program area have been employed by Cooperative Extension for six or more years. As shown in Table 13, (page 116) 35 percent of the Home Economics staff responding have been employed for three to five years and 44 percent of the 4-H staff. The overall profile of field staff in Massachusetts has been influenced in recent years by a significant number of retirements by Agriculture staff, as well as budget constraints which have restricted filling of vacant positions.

Table 14 (page 117) shows that there is a slight trend for those with less than five years of employment to have degrees in education or the social sciences. The diversity of degrees is most evident among staff employed in the six to ten year and the 11 to 20 year ranges.

Table 15 (page 118) shows that staff assigned to Agriculture and Home Economics program areas are the most likely to have their highest degrees in agriculture or home economics. Staff in 4-H have the widest range of academic backgrounds, with a majority having their highest degree in education or the social sciences.

Results of Phase III

Rating of the Importance of the Proposed Indicators

Although no specific hypotheses were formulated for this study, several related questions were addressed. First, how can indicators of quality in non-formal adult education be identified or developed? Can a method be developed that is not overly complicated, with the potential for use by other adult educators? Second, what do participants or users, key volunteers, and staff perceive as indicators of quality in non-formal adult education programs. Third, to what extent do users, key volunteers and staff agree or disagree on indicators of quality for an adult education program?

Phase III of this research focused on questions two and three. As discussed earlier, 58 potential indicators of quality had resulted from Phases I and II. Phase III was designed to further identify those indicators of most importance to participants or users, key volunteers and staff, and to ascertain the differences in importance, if any, between and among the three groups.

Table 16 (pages 119 & 120) lists the 58 proposed indicators in the order they were presented on the questionnaires. This order is based primarily on Bennett's Hierarchy, the evaluation model discussed previously on page 84. The mean score combined for all respondents is pre

sented first, followed by mean scores for each subgroup: users, key volunteers, and staff. The last column lists the level of significance resulting from the analysis of variance. A level of .05 or less indicates that there is a significant difference in the mean rating for that indicator among the three subgroups. For 25 items, or 43.1 percent, there is an apparent significant difference among the three groups on the importance of the items.

Table 17 (pages 121 & 122) ranks the 58 proposed indicators in the order of importance resulting from the mean score of total responses, from highest to lowest. Division of the items, based on this ranking, has been made into four quartiles. The fourth and first quartile contain 15 items each, and the middle two quartiles contain 14 items each, as an arbitrary division of the 58 items.

Table 18 (pages 123 & 124) lists the item number and the mean score for each by total response, and by subgroup, in descending order of importance. Examination of this table shows that of the ten indicators rated highest by each group, six indicators were the same (items 1, 19, 17, 8, 45, and 20). However, of these six, two (items 19 and 17) were identified as varying significantly between groups.

This apparent contradiction may be explained in part by examination of the means by group. It appears that as a group, staff rated most items slightly higher in importance than did the other two groups. For example, item number 19 received a mean score of 4.816 from staff, 4.583 from key

volunteers, and 4.551 from clientele; these scores placed "Information is accurate and reliable" second in combined responses, first by staff, and second by both users and key volunteers. Analysis of variance indicated that differences based on the means are significant.

By ranks based on mean scores, item 17, "Information is current," was placed third in the users' group, tied for second in the staff group, and fourth in the key volunteer group. The mean scores range from a high of 4.685 from staff to a low of 4.434 by users. Again, analysis of variance indicated that there was a significant difference among the three groups; however, the mean scores of each group place the item as one of the top three tending to nullify the apparent significant difference.

Based on the mean scores of each group, three further items are placed in the top ten of each group. The mean scores of staff and users placed item 33 ("Programs are designed to meet the needs of people") and item 44 ("Questions are handled in a timely manner") in top ten, while staff and key volunteers agreed on item 12 ("Program is credible") as one of the top ten indicators.

If this examination of rankings by mean score is extended to the top quartile of items (15), the scores of each of the three groups resulted in nine items or 60 percent in the fourth quartile. Items in the fourth quartile, in order of rank importance are:

- Staff are competent in their technical area of expertise

- Information is accurate and reliable
- Information is current
- Staff have good communication skills
- Answers to questions are understandable
- Programs are designed to meet the needs of people
- Staff clearly explain ideas and concepts
- People gain new knowledge as a result of the program
- Program is credible
- Staff are creative and resourceful
- Questions are handled in a timely manner
- Clientele receive value
- Staff are effective teachers
- Staff strive for excellence
- Cooperative Extension addresses problems of real concern

Mean scores of users and staff resulted in agreement on two further items; scores of users and key volunteers resulted in common placement of three additional items, and scores of key volunteers and staff provided further agreement on additional one item.

Scores of users and key volunteers resulted in item 4, "staff are creative and resourceful," being in the top quartile, while scores of key volunteers and staff resulted in "Clientele receive value," "People gain new knowledge as a result of the program," and "Staff are effective teachers" being in the top quartile.

Of the fourteen items in the third quartile, only one indicator had mean scores by all three groups that placed it in the third quartile. Mean scores of users and staff placed seven indicators or 50 percent in the third quartile, while mean scores of key volunteers and staff placed 21 percent in the third quartile. Scores of users and key volunteers resulted in four items or 28 percent agreement in the third quartile.

The mean scores of three groups placed three items, or 21 percent, in the second quartile, while scores of users and staff placed five of 14 items in this quartile. Mean scores of key volunteers and staff did not result in any additional indicators in common beyond the three common to all groups. The mean scores of users and key volunteers resulted in three indicators in common in this quartile.

The first quartile of 15 items exhibited the same consistency of agreement among the three groups based on rankings of mean scores as seen in the top quartile. Of the 15 items with the lowest combined mean scores, 10 items (66 percent) had mean scores that resulted in the first quartile of each of the three groups. They were:

- Staff have good academic credentials
- Learners assist in planning programs
- Staff and clientele jointly decide goals and objectives
- Audiences participate actively
- Local people assist in directing the program
- Community leaders assist in delivering the program
- Participants often attend other Cooperative Extension programs
- People change attitudes as a result of the program
- Personal or business financial status improves as a result of Cooperative Extension.

Of these, two received the lowest scores by total mean responses. One, "Participants often attend other Cooperative Extension programs," was rated 2.448 by staff, the lowest of all scores and 2.836, the lowest score by key volunteers.

Another way to compare the scores is to look at the ranges of scores in the first quartile of items, ranked on

the mean scores of the total responses. The mean scores for the combined responses ranged from a high of 4.639 to a low of 4.168 for the top 15 items. The range of participant scores was 4.633 to 4.105 and for key volunteers, 4.587 to 4.177. Staff scores ranged from 4.816 to 4.326, a somewhat higher range than the other two groups.

Figure 1 (page 125) shows the frequency of items by range of mean scores. This supports the earlier observation that staff tended to rate potential indicators slightly higher, or more important than did users or key volunteers. For example, staff rated seven indicators at 4.5 or higher, compared to two items each by users and key volunteers. A Likert scale was used, with 5 = extremely important, 4 = very important, 3 = important, 2 = slightly important, and 1 = not important. The lowest score was 2.448, or somewhat above slightly important. In other words, no indicator was rated 'not important.'

Discussion and Interpretation of Items Showing a Significant Difference in Mean Scores

This section is an exploration of possible reasons for the apparent significant differences observed as a result of the analysis of variance. Indicators are discussed in the order of importance as determined by the overall mean score of the total responses shown in Table 23. The indicator under discussion is in each instance underlined preceding the pertinent text, followed by the probability score that

indicates an apparent significant difference among the three groups.

Information is accurate and reliable: (Significant difference probability: 0.004). Rated the highest by staff with a mean score of 4.816, the mean scores of users (4.551) and key volunteers (4.583) place it second overall. This may reflect staff's grounding in the Cooperative Extension philosophy of providing objective, research-based information, often stated as part of Cooperative Extension's mission.

Information is current: (Significant difference probability: 0.008). This indicator was deemed more important by staff, with a mean of 4.685 than by key volunteers (4.377), although the mean scores of each group ranked it third in overall importance. Again, staff are encouraged to stay up to date in their professional fields, through Cooperative Extension sponsored training, advanced graduate work and other professional development activities. This institutional expectation is specified in job descriptions for all professional staff. Thus, it is logical to expect that staff would rate this indicator higher. Also, users expect staff to have current information, as staff are closer to sources of information at universities.

Programs are designed to meet the needs of people: (Significant Difference probability: 0.035). Mean scores of the three groups resulted this item being ranked in the fourth quartile, with staff (4.539) assigning more impor-

tance than users (4.335) or key volunteers (4.222). One interpretation of this that the Cooperative Extension program development process stresses "needs assessment."

Program is credible: (Significant Difference probability: 0.003). Staff rated this indicator 4.5 or midway between extremely important and very important, higher than users and key volunteers. It may be that the word credible may demand a more subjective judgment than other potential indicators. Also, staff may have the strongest investment in whether a program is credible or not.

Questions are handled in a timely manner: (Significant Difference probability: 0.010). Again, the staff mean score at 4.461 was higher than key volunteers at 4.177 and users at 4.170. One explanation for this difference is that staff may think that the public expects a quick response to requests for information, and therefore, staff rated this as a more important indicator of quality. It should be noted that the mean scores of this indicator ranked it in the top quartile by all three groups.

Clientele receive value: (Significant difference probability: 0.012). The staff mean score of 4.452 was higher than the mean scores of key volunteers and users at 4.153 and 4.146 respectively. This is also a subjective item. However, staff may rate it higher in importance due to the nature of Cooperative Extension as a non-formal adult education program within the formal higher education system

funded by the state, competing for recognition, status and funding with other academic programs of the university.

Staff are effective teachers: (Significant difference probability: 0.009). Users rated this lower at 4.090 than did key volunteers at 4.274 and staff at 4.427. This may be due to the nature of the interaction users have with Cooperative Extension, which was not explored in detail in this study. The frequency of contact that the majority of users have with Cooperative Extension based on responses in this study was once a month or less. That contact may have been through the relatively impersonal method of a newsletter, a telephone inquiry, or a workshop. In the first two methods, the user may not see the producer of the newsletter or the person who answers the phone question as an educator or teacher. In other words, the user may have an image of "effective teacher" that is founded on secondary education experience, which the type of contact with Cooperative Extension does not match.

Staff strive for excellence: (Significant difference probability: 0.036). Both staff and key volunteers rated this potential indicator similarly at 4.300 and 4.326 respectively, while users rated it 4.075. A possible interpretation may be that since key volunteers are more likely to have direct and regular interaction with individual staff as well as have the opportunity to hear reports of staff achievements, such as papers written and awards received,

they can be more cognizant of staff excellence. The majority of users may not have such knowledge.

Cooperative Extension addresses problems of real concern: (Significant difference probability: 0.008). Users rated this considerably lower at 4.052 than did key volunteers at 4.131 and staff at 4.420. The possible reason for the difference is that users may be likely to be involved in only one facet of Cooperative Extension, whereas key volunteers as members of the county Board that gives guidance to Cooperative Extension see the breadth of Extension work. Due to the interdisciplinary, issue-based program direction Cooperative Extension initiated two years ago, staff are most cognizant of the range of problems addressed.

Program is adequately funded: (Significant difference probability: 0.020). Users rated this as 3.981 or slightly under very important, while key volunteers at 4.175 and staff at 4.333 rated it somewhat higher. This may be due to the fact that users are less aware of sources and levels of funding than are key volunteers who deal with budgets, or staff, who are even more conscious of fiscal resources due to several years of limited funding by the Commonwealth.

Activities suit the topic: (Significant difference probability: 0.014). Key volunteers rated this item the lowest among the three groups. Although the group scores are different, the mean scores placed it in the upper half of the third quartile. A possible explanation is that staff are more aware of the range of educational methods used.

Unsolicited feedback from participants is welcome: (Significant difference probability: 0.021). Staff placed greater importance on this indicator than did key volunteers or users. This may be another instance in which the nature of the interaction of the user with Cooperative Extension is a factor. Also staff may believe that a program that receives and acts upon feedback is closer to a quality model of program planning process of involving people than one that does not.

Activities suit the audience: (Significant difference probability: 0.003). Users and key volunteers concurred somewhat on the importance of this item as an indicator of quality with mean ratings of 3.952 and 3.934. Staff rated it higher at 4.337. The staff perception of the importance may reflect their experience in developing programs for a wide range of audiences.

Cooperative Extension programs have positive social and economic consequences: (Significant difference probability: 0.042). Staff deemed this more important at 4.169 than did key volunteers at 4.017 and users at the lower 3.865. Mean scores by each group place it in the third quartile by staff and key volunteers and in the second quartile for users. Nationally, since the 1977 Farm Bill, Cooperative Extension has been expected to demonstrate the social and economic consequences of its programs. Thus, staff and--to a lesser extent--key volunteers may be expected to view this indica-

tor as a standard against which to determine the worth of a program.

Participants use the knowledge or skills gained: (Significant difference probability: 0.004). Staff and users are closer to agreement on the importance of this indicator at 4.180 and 3.925 respectively than they are to key volunteers whose mean rating is 3.698. One possible interpretation for this variance is that staff and users are directly involved with 'knowledge and skills gained,' and for whom the indicator may be a more definitive statement. However, the mean score ranks in the third quartile for staff and in the second quartile for key volunteers.

Publications and materials are professional in appearance: (Significant difference probability: 0.000). The mean score of 4.169 by staff placed this indicator in the third quartile, while ratings of key volunteers at 3.750 and users at 3.684 placed it in the second quartile. Because publications are often used as an academic indicator of quality, Cooperative Extension staff, in a University environment, may place more importance on this indicator than the two other groups.

People learn a new skill: (Significant difference probability: 0.010). Users rated this potential indicator at 3.937, which placed it in the third quartile. Staff and key volunteers rated it 3.685 and 3.548, respectively which placed it in the first quartile. Users may attribute more

importance to an indicator that is more likely to be within their experience.

The advisory board is representative of the community: (Significant difference probability: 0.048). Key volunteers placed slightly more importance on this at 3.942 than did staff at 3.791 or users at 3.579. The mean score of key volunteers placed it at the top of the second quartile, while the other two groups' scores placed it near the top of the lowest quartile. As members of a board very similar to an advisory board, key volunteers are naturally concerned about the representativeness of their board, which may influence their view of this indicator.

Clientele participate in evaluating programs: (Significant difference probability: 0.001). Staff's rating of this indicator at 3.989 demonstrated that they considered it more important than did users at 3.551 and key volunteers at 3.426. The strong emphasis Cooperative Extension administration places on evaluation of programs is probably the reason for the staff's higher score.

Participants receive personal attention: (Significant difference probability: 0.002). At 3.703, users rated this indicator slightly higher than key volunteers at 3.689, both resulting in placement in the second quartile. However, staff's rating of 3.285 was much lower, which placed in the first quartile. Users may be, as would be natural, putting their personal interest first. Staff, on the other hand, recognize that the magnitude of clientele numbers limits

their ability to provide personal attention. In fact, staff have increasingly turned to training master volunteers who are expert in selected topics to provide the personal attention expected by certain clientele groups.

There is an active advisory board: (Significant difference probability: 0.004). Key volunteers, as might be expected, placed more emphasis on the importance of this indicator at 3.900 than did users at 3.567 and staff at 3.310. By their membership on the Board of Trustees, key volunteers are perhaps more disposed to rate an active board as more important.

People change behavior as a result of the program: (Significant difference probability: 0.001). Staff clearly rated this indicator as more important at 3.820 than did users at 3.341 and key volunteers at 3.217. One of the current emphases in Cooperative Extension evaluation is the extent to which participants change behavior, which may explain the reason for the staff's difference in importance.

People change attitudes as a result of the program: (Significant difference probability: 0.011). Rated at 3.169 by key volunteers and 3.294 by users, which placed this indicator in the lowest quartile as does the higher rating of 3.667 by staff. As attitudes are more personal, it may be reasonable to think that the public does not expect a public educational agency to be responsible for changing attitudes. However, staff's higher rating of this indicator may be related to attitudes being part of 'KASA',

or "knowledge, attitudes, skills and aspirations," the fifth level of Bennett's Hierarchy, a major evaluation model for Cooperative Extension.

Community leaders are involved in developing programs: (Significant difference probability: 0.027). Not unexpectedly, the key volunteers placed considerably more importance on this indicator at 3.475 than did users at 3.054 or staff at 3.075. Key volunteers are more probable to view themselves as community leaders. In fact, they are often selected for membership on the county Board of Trustees for this reason.

Participants often attend other Cooperative Extension programs: (Significant difference: 0.000). As an overall measure of importance of the quality of Cooperative Extension programs, this indicator had the lowest mean score of total combined responses. Staff rated it lowest at 2.448, while users rated it at 3.155. The consistency of the rating, which placed it at the bottom of the first quartile, may be due in part to the fact that all three groups have strong identities with a particular program component of Cooperative Extension.

Summary of Discussion

Of the 58 proposed indicators of quality, there was an apparent significant difference in the way that the three groups viewed the importance of 25 indicators. While mean scores indicated a difference in the perceived importance,

ranks based on the mean scores indicated that there was a considerable degree of consistency among the three groups or between pairs of groups.

Results of Factor Analysis

In an attempt to compare the model of Bennett's Hierarchy with the questionnaire results, factor analysis was used. Since Bennett's Hierarchy has seven levels, seven factors were predicted. In the first run, the component loadings resulted in the identification of only one factor, which contained all but two indicators. A second, rotated analysis was made, resulting in the identification of six factors which are discussed in the following section.

Factor 1: This factor may be described as "information delivery/communication process." It includes the following 13 indicators, with an eigenvalue of 24.065:

7. Staff are effective teachers
8. Staff have good communication skills
17. Information is current
19. Information is accurate and reliable
20. Staff clearly explain ideas and concepts
25. Goals and objectives are stated clearly
26. Goals and objectives are stated in advance
28. Activities suit topic
29. Activities suit audience
41. Participants are positive about program
43. Unsolicited feedback is welcome
45. Answers are understandable
48. People gain new knowledge

On examination, this factor encompasses components relating to educational methodology (7, 28, 29, 48); information as information dissemination (17, 19, 45); and information as a precursor to learning (25, 26). The inter-

active nature of information delivery and learning (8, 20, 41, 43) are also dimensions of this factor. Compared to Bennett's Hierarchy, this factor includes part of level two, 'Activities' and level four, 'Reactions.'

Factor 2. This factor clearly centers on "people involvement," the third level of Bennett's Hierarchy. The 12 indicators, with an eigenvalue of 3.326, which comprise this factor are:

22. Learners are able to try what's being taught
23. Learners assist in planning programs
24. Clientele participate in evaluating programs
27. Staff and clientele jointly decide goals and objectives
31. Audiences participate actively
32. Program builds on participants' experience and expertise
34. Local people assist in directing the program
35. There is an active advisory board
36. The advisory board is representative of the community
37. Learners feel involved
38. Community leaders are involved in developing programs
39. Community leaders assist in delivering programs

Types of involvement range from the personal learning situation (22, 31) to the more external environment of the community (36, 38, 39).

Factor 3. This factor, while comprised of only five indicators, is based on "end results," the seventh level of Bennett's Hierarchy. With an eigenvalue of 2.451, this factor includes the following indicators:

53. Cooperative Extension addresses problems of real concern
55. Participants feel confident in skills learned
56. Quality of life for individuals and families improves as a result of Extension
57. Personal or business financial status improves as a result of Cooperative Extension

58. Cooperative Extension programs have positive social and economic consequences

Although "Participants feel confident in skills learned" may also be considered at the fifth level (KASA) of Bennett's Hierarchy, the expression of confidence moves it toward the higher seventh category of end results.

Factor 4. Other studies have shown 'reputation' to be an indicator of quality in higher education. Five indicators were identified as comprising this factor with an eigenvalue of 2.095. They can be described as "organizational reputation." They are:

2. Staff have good academic credentials
11. Program has a good reputation
12. Program is credible
14. Publications and materials are professional in appearance
16. Program meets recognized standards
21. Programs carry out mission of Cooperative Extension

The characteristics of these indicators may be described as aspects of reputation, or status of the organization. Although 'staff have good academic credentials' is apparently misplaced in its alignment with "organizational reputation," academic credentials of the faculty are often part of an institution's reputation. Although this factor is not as clearly linked to Bennett's Hierarchy, a case can be made for a relationship to the fourth level, 'reactions.'

Factor 5. Six indicators were identified as components of this factor with an eigenvalue of 1.626. They are:

46. Participants often attend other Cooperative Extension programs
47. People change attitudes as a result of the program

49. People report that they have learned something that they intend to use later
50. People learn a new skill
51. Participants use the knowledge or skills gained
52. People change behavior as a result of the program

The indicators forming this factor are comparable to level five on the Hierarchy which is called KASA for knowledge, attitudes, skills and aspirations. 'Attending other programs' and '. . . learned something to use later' may be considered aspirations. Thus, this factor can be called KASA.

Factor 6. This factor, with an eigenvalue of 1.447, was heavily weighted toward personal staff characteristics with the following indicators:

3. Staff are dynamic and enthusiastic
4. Staff are creative and resourceful
5. Staff are empathetic and caring
10. Staff provide leadership to solve problems
15. Program is adequately funded

Therefore, this factor may be identified as 'personal characteristics of staff.' Although item 15, 'program is adequately funded' is not a personal staff characteristic, another framework for this factor is that of Bennett's Hierarchy's first level consists of inputs or resources. Staff resources often constitute 80-90 percent of Cooperative Extension's budget, so in that context, it is congruent. It is interesting to note that these personal characteristics are more subjective in nature than the more objective indicator 'staff have good academic credentials,' which is a component aligned with organizational reputation.

Reliability tests using Cronbach's coefficient alpha were performed for each factor. The scores for each factor are shown below:

1. information delivery/communication process - 0.891
2. people involvement - 0.908
3. end results - 0.871
4. organizational reputation - 0.793
5. knowledge, attitudes, skills and aspirations - 0.859
5. personal characteristics of staff - 0.713

These scores were slightly higher than the reliability scores for the four sub-scales on the Young and Cunningham instrument at the same stage of development. For the sub-scales, the scores ranged from 0.700 to 0.850.

Summary of Factor Analysis

While seven factors were predicted, rotated varimax factor analysis resulted in six factors, all of which were shown to be related directly or indirectly to Bennett's Hierarchy, the evaluation model on which the indicators were organized. The factors are summarized as

1. information delivery/communication process
2. people involvement
3. end results
4. organizational reputation
5. knowledge, attitudes, skills and aspirations
6. personal characteristics of staff

When compared to the four factors identified in the Ohio Study, only two factors in this study are similar. Factor 1, 'information delivery/communication process,' is similar to 'information' in the Ohio Study, although it is not possible to compare the specific items in the factors.

Factor 6, 'personal characteristics of staff' is similar to 'agent,' a factor in the Ohio Study. Reliability scores for each of the six factors ranged from 0.713 to 0.908.

TABLE 1 FREQUENCY OF CONTACT BY USERS AND KEY VOLUNTEERS WITH COOPERATIVE EXTENSION

FREQUENCY	USERS		KEY VOLUNTEERS	
	Number	Percent	Number	Percent
Less than once a month	66	36.5%	10	15.9%
Once a month	67	37.0%	17	27.0%
Two to five times a month	39	21.5%	24	38.1%
More than five times a month	9	5.0%	12	19.0%
	181	100.0%	63	100.0%

TABLE 2 YEARS OF CONTACT BY USERS AND KEY VOLUNTEERS WITH COOPERATIVE EXTENSION

YEARS	USERS		KEY VOLUNTEERS	
	Number	Percent	Number	Percent
Less than one year	4	2.2%	1	1.6%
One to two years	17	9.3%	3	4.8%
Three to five years	34	18.6%	10	15.9%
Six to ten years	41	22.4%	2	3.2%
Eleven to twenty years	36	19.7%	14	22.2%
More than twenty years	51	27.9%	33	52.4%
	183	100.0%	63	100.0%

TABLE 3 PROGRAM AREA FROM WHICH USERS AND KEY VOLUNTEERS ARE MOST LIKELY TO RECEIVE INFORMATION

PROGRAM AREA	USERS		KEY VOLUNTEERS	
	Number	Percent	Number	Percent
Agriculture	74	40.9%	30	47.6%
Home Economics	43	23.8%	14	22.2%
4-H	35	19.3%	15	23.8%
Community Resource Develop.	16	8.8%	3	4.8%
Expanded Food & Nutrition	13	7.2%	1	1.6%
	181	100.0%	63	100.0%

TABLE 4 FREQUENCY OF CONTACT BY YEARS OF CONTACT BY USERS WITH COOPERATIVE EXTENSION

CONTACTS PER MONTH	YEARS													
	<1		1 - 2		3 - 5		6 - 10		11 - 20		20>		TOTAL	
<1	2	3%	4	6%	16	24%	13	20%	15	23%	16	24%	66	100%
1 - 2	2	3%	10	15%	12	18%	16	24%	12	18%	15	22%	67	100%
3 - 5	0	0%	2	5%	3	8%	11	28%	8	21%	15	38%	39	100%
5>	0	0%	0	0%	3	33%	0	0%	1	11%	5	56%	9	100%

TABLE 5 FREQUENCY OF CONTACT BY YEARS OF CONTACT BY KEY VOLUNTEERS WITH COOPERATIVE EXTENSION

CONTACTS PER MONTH	YEARS													
	<1		1 - 2		3 - 5		6 - 10		11 - 20		20>		TOTAL	
<1	1	10%	1	10%	2	20%	0	0%	1	10%	5	50%	10	100%
1	0	0%	2	12%	4	24%	0	0%	3	18%	8	47%	17	100%
2 - 5	0	0%	0	0%	4	17%	1	4%	7	29%	12	50%	24	100%
5>	0	0%	0	0%	0	0%	1	8%	3	25%	8	67%	12	100%

TABLE 6 FREQUENCY OF CONTACT BY PROGRAM AREA BY USERS WITH COOPERATIVE EXTENSION

PROGRAM AREA	CONTACTS PER MONTH									
	<1		1 - 2		3 - 5		5>		TOTAL	
AGRIC	30	41%	22	30%	18	25%	3	4%	73	100%
HOME ECON	17	40%	21	49%	4	9%	1	2%	43	100%
4 - H	3	9%	13	37%	14	40%	5	14%	35	100%
CRD/NR	9	60%	4	27%	2	13%	0	0%	15	100%
EFNEP	6	46%	7	54%	0	0%	0	0%	13	100%

TABLE 7 FREQUENCY OF CONTACT BY PROGRAM AREA BY KEY VOLUNTEERS WITH COOPERATIVE EXTENSION

PROGRAM AREA	CONTACTS PER MONTH									
			1 - 2		3 - 5		5>		TOTAL	
AGRIC	6	20%	9	30%	8	27%	7	23%	30	100%
HOME ECON	2	14%	1	7%	8	57%	3	21%	14	100%
4 - H	2	13%	5	33%	7	47%	1	7%	15	100%
CRD/NR	0	0%	2	67%	0	0%	1	33%	3	100%
EFNEP	0	0%	0	0%	0	0%	1	100%	1	100%

TABLE 8 YEARS OF CONTACT BY PROGRAM AREA BY USERS WITH COOPERATIVE EXTENSION

PROGRAM AREA	YEARS												TOTAL	
	<1		1 - 2		3 - 5		6 - 10		11 - 20		20>			
AG	2	3%	3	4%	8	11%	19	26%	19	26%	23	31%	74	100%
HE	1	2%	8	19%	9	21%	8	19%	5	12%	12	28%	43	100%
4-H	0	0%	3	9%	4	11%	8	23%	8	23%	12	34%	35	100%
CRD/NR	0	0%	2	13%	6	38%	2	13%	4	25%	2	13%	16	100%
EFNEP	1	8%	1	8%	6	46%	3	23%	0	0%	2	15%	13	100%

TABLE 9 YEARS OF CONTACT BY PROGRAM AREA BY KEY VOLUNTEERS WITH COOPERATIVE EXTENSION

PROGRAM AREA	YEARS												TOTAL	
	<1		1 - 2		3 - 5		6 - 10		11 - 20		20>			
AG	1	3%	2	7%	5	17%	1	3%	5	17%	16	53%	30	100%
HE	0	0%	1	7%	1	7%	1	7%	5	36%	6	43%	14	100%
4-H	0	0%	0	0%	3	20%	0	0%	2	13%	10	67%	15	100%
CRD/NR	0	0%	0	0%	1	33%	0	0%	1	33%	1	33%	3	100%
EFNEP	0	0%	0	0%	0	0%	0	0%	0	0%	1	100%	1	100%

TABLE 10 STAFF EMPLOYMENT BY YEARS OF SERVICE IN COOPERATIVE EXTENSION

YEARS	Number	Percent
Less than one	2	2.2%
One to two	5	5.6%
Three to five	20	22.5%
Six to ten	27	30.3%
Eleven to twenty	22	24.7%
More than twenty	13	14.6%
	89	100.0%

TABLE 11 ASSIGNMENT OF STAFF BY PROGRAM AREA

PROGRAM AREA	Number	Percent
Agriculture	24	27.3%
Home Economics	26	29.5%
4-H	26	29.5%
CRD/NR	7	8.0%
EFNEP	5	5.7%
	88	100.0%

TABLE 12 PROFILE OF STAFF BY HIGHEST DEGREE MAJOR

DEGREE	Number	Percent
Agriculture	19	21.3%
Home Economics	17	19.1%
Education	20	22.5%
Social Sciences	11	12.4%
Natural Sciences	8	9.0%
Business	8	9.0%
Humanities	4	4.5%
Other	2	2.2%
	89	100.0%

TABLE 13 STAFF TENURE BY PROGRAM AREA

	PROGRAM AREA									
YEARS	AGRIC.		HOME ECONOMICS		4-H		CRD/NR		EFNEP	
1 or less	1	4%	0	0%	1	4%	0	0%	0	0%
1 to 2	1	4%	1	4%	2	8%	1	14%	0	0%
3 to 5	4	17%	9	35%	5	19%	0	0%	1	20%
6 to 10	8	33%	3	12%	11	42%	2	29%	3	60%
11 to 20	5	21%	8	31%	5	19%	3	43%	1	20%
More than 20	5	21%	5	19%	2	8%	1	14%	0	0%
	24	100%	26	100%	26	100%	7	100%	5	100%

TABLE 14 PROFILE OF STAFF BY HIGHEST DEGREE MAJOR AND YEARS OF EMPLOYMENT

MAJOR OF HIGHEST DEGREE	YEARS OF EMPLOYMENT						
	<1	1-2	3-5	6-10	11-20	20>	TOTAL
Agriculture	0	0	3	6	4	6	19
Home Economics	0	0	7	3	4	3	17
Education	0	1	6	4	5	4	20
Social Sciences	1	4	1	4	1	0	11
Natural Sciences	1	0	1	3	3	0	8
Business	0	0	0	5	3	0	8
Humanities	0	0	0	2	2	0	4
Other	0	0	2	0	0	0	2
	2	5	20	27	22	13	89

TABLE 15 PROFILE OF STAFF BY HIGHEST DEGREE MAJOR AND ASSIGNED PROGRAM AREA

MAJOR OF HIGHEST DEGREE	ASSIGNED PROGRAM AREA					
	AGRIC.	HOME ECON.	4-H	CRD/NR	EFNEP	TOTAL
Agriculture	16	0	2	1	0	19
Home Economics	0	14	3	0	0	17
Education	3	7	8	1	1	20
Social Sciences	1	1	7	1	1	11
Natural Sciences	3	0	1	3	1	8
Business	0	1	4	1	2	8
Humanities	1	2	1	0	0	4
Other	0	1	0	0	0	1
	24	26	26	7	5	88

TABLE 16 INDICATORS BY RANK ORDER BASED ON MEAN TOTAL RESPONSE

ITEM	POTENTIAL INDICATOR	TOTAL	USERS	KEYVOL	STAFF	PROB
1	Staff are competent in their technical area of expertise	4.639	4.633	4.587	4.685	0.612
2	Staff have good academic credentials	3.319	3.237	3.525	3.337	0.222
3	Staff are dynamic and enthusiastic	4.147	4.069	4.270	4.213	0.163
4	Staff are creative and resourceful	4.260	4.233	4.242	4.326	0.579
5	Staff are empathetic and caring	3.992	4.006	4.048	3.926	0.666
6	Staff put clientele first	4.106	4.023	4.177	4.224	0.167
7	Staff are effective teachers	4.216	4.090	4.274	4.427	0.009 *
8	Staff have good communication skills	4.429	4.407	4.317	4.551	0.104
9	Staff strive for excellence	4.186	4.075	4.300	4.326	0.036
10	Staff provide leadership to solve problems	4.080	4.105	4.115	4.006	0.626
11	Program has a good reputation	4.018	3.994	3.887	4.157	0.188
12	Program is credible	4.275	4.168	4.262	4.500	0.003 *
13	Clientele receive value	4.230	4.146	4.153	4.452	0.012 *
14	Publications and materials are professional in appearance	3.828	3.684	3.750	4.169	0.000 *
15	Program is adequately funded	4.120	3.981	4.175	4.333	0.020 *
16	Program meets recognized standards	3.970	3.915	3.983	4.076	0.438
17	Information is current	4.492	4.434	4.377	4.685	0.008 *
18	Information is based on research	4.092	4.117	3.902	4.176	0.187
19	Information is accurate and reliable	4.628	4.551	4.583	4.816	0.004 *
20	Staff clearly explain ideas and concepts	4.328	4.250	4.342	4.472	0.079
21	Programs carry out mission of Cooperative Extension	4.127	4.131	4.186	4.080	0.802
22	Learners are able to try what's being taught	3.839	3.916	3.672	3.810	0.140
23	Learners assist in planning programs	3.149	3.075	3.200	3.250	0.376
24	Clientele participate in evaluating programs	3.650	3.551	3.426	3.989	0.001 *
25	Goals and objectives of the program are stated clearly	3.984	3.924	4.016	4.079	0.407
26	Goals and objectives of the program are stated in advance	3.773	3.753	3.823	3.775	0.902
27	Staff and clientele jointly decide goals and objectives	3.285	3.259	3.443	3.222	0.414
28	Activities suit the topic	4.064	4.033	3.873	4.264	0.014 *
29	Activities suit the audience	4.057	3.952	3.934	4.337	0.003 *

* = SIGNIFICANCE AT .05 LEVEL

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(TABLE 16, continued)

ITEM	POTENTIAL INDICATOR	TOTAL	USERS	KEYVOL	STAFF	PROB
30	Programs address important problems or issues	4.026	3.951	3.934	4.239	0.054
31	Audiences participate actively	3.475	3.393	3.552	3.579	0.293
32	Program builds on participants' experience and expertise	3.715	3.683	3.667	3.809	0.528
33	Programs are designed to meet the needs of people	4.370	4.335	4.222	4.539	0.035 *
34	Local people assist in directing the program	3.303	3.221	3.533	3.294	0.193
35	There is an active advisory board	3.567	3.582	3.900	3.310	0.004 *
36	The advisory board is representative of the community	3.713	3.579	3.942	3.791	0.048 *
37	Learners feel involved	3.830	3.785	3.850	3.899	0.649
38	Community leaders are involved in developing programs	3.145	3.054	3.475	3.075	0.027 *
39	Community leaders assist in delivering programs	2.931	2.957	3.100	2.764	0.195
40	Participants receive personal attention	3.589	3.703	3.689	3.285	0.002 *
41	Participants are positive about the program	4.071	4.023	4.049	4.182	0.343
42	Program has the respect of community leaders	3.807	3.702	3.952	3.909	0.142
43	Unsolicted feedback from participants is welcome	4.061	3.948	4.095	4.258	0.021 *
44	Questions are handled in a timely manner	4.251	4.170	4.177	4.461	0.010 *
45	Answers to questions are understandable	4.405	4.330	4.452	4.522	0.090
46	Participants often attend other Cooperative Extension programs	2.896	3.155	2.836	2.448	0.000 *
47	People change attitudes as a result of the program	3.373	3.294	3.169	3.667	0.011 *
48	People gain new knowledge as a result of the program	4.289	4.322	4.143	4.326	0.267
49	People report that they have learned something they intend to use later	3.898	3.884	3.836	3.966	0.700
50	People learn a new skill	3.794	3.937	3.548	3.685	0.010 *
51	Participants use the knowledge or skills gained	3.951	3.925	3.698	4.180	0.004 *
52	People change behavior as a result of the program	3.453	3.341	3.217	3.820	0.001 *
53	Cooperative Extension addresses problems of real concern	4.168	4.052	4.131	4.420	0.008 *
54	Participants feel confident in skills learned	3.933	3.936	3.852	4.023	0.454
55	Quality of life for individuals & families improves as a result of CE	3.992	3.936	4.000	4.096	0.414
56	Quality of life in communities improves as a result of CE	3.915	3.880	4.016	3.909	0.635
57	Personal or business financial status improves as a result of CE	3.445	3.396	3.362	3.590	0.344
58	CE programs have positive social and/or economic consequences	3.978	3.865	4.017	4.169	0.042 *

* = SIGNIFICANCE AT .05 LEVEL

TABLE 17 INDICATORS BY RANK ORDER BASED ON MEAN TOTAL RESPONSE

RANK	ITEM	POTENTIAL INDICATOR	TOTAL	USERS	KEYVOL	STAFF	PROB
1	1	Staff are competent in their technical area of expertise	4.639	4.633	4.587	4.685	0.612
2	19	Information is accurate and reliable	4.628	4.551	4.583	4.816	0.004 *
3	17	Information is current	4.492	4.434	4.377	4.685	0.008 *
4	8	Staff have good communication skills	4.429	4.407	4.317	4.551	0.104
5	45	Answers to questions are understandable	4.405	4.330	4.452	4.522	0.090
6	33	Programs are designed to meet the needs of people	4.370	4.335	4.222	4.539	0.035 *
7	20	Staff clearly explain ideas and concepts	4.328	4.250	4.342	4.472	0.079
8	48	People gain new knowledge as a result of the program	4.289	4.322	4.143	4.326	0.267
9	12	Program is credible	4.275	4.168	4.262	4.500	0.003 *
10	4	Staff are creative and resourceful	4.260	4.233	4.242	4.326	0.579
11	44	Questions are handled in a timely manner	4.251	4.170	4.177	4.461	0.010 *
12	13	Clientele receive value	4.230	4.146	4.153	4.452	0.012 *
13	7	Staff are effective teachers	4.216	4.090	4.274	4.427	0.009 *
14	9	Staff strive for excellence	4.186	4.075	4.300	4.326	0.036
15	53	Cooperative Extension addresses problems of real concern	4.168	4.052	4.131	4.420	0.008 *
16	3	Staff are dynamic and enthusiastic	4.147	4.069	4.270	4.213	0.163
17	21	Programs carry out mission of Cooperative Extension	4.127	4.131	4.186	4.080	0.802
18	15	Program is adequately funded	4.120	3.981	4.175	4.333	0.020 *
19	6	Staff put clientele first	4.106	4.023	4.177	4.224	0.167
20	18	Information is based on research	4.092	4.117	3.902	4.176	0.187
21	10	Staff provide leadership to solve problems	4.080	4.105	4.115	4.006	0.626
22	41	Participants are positive about the program	4.071	4.023	4.049	4.182	0.343
23	28	Activities suit the topic	4.064	4.033	3.873	4.264	0.014 *
24	43	Unsolicted feedback from participants is welcome	4.061	3.948	4.095	4.258	0.021 *
25	29	Activities suit the audience	4.057	3.952	3.934	4.337	0.003 *
26	30	Programs address important problems or issues	4.026	3.951	3.934	4.239	0.054
27	11	Program has a good reputation	4.018	3.994	3.887	4.157	0.188
28.5	55	Quality of life for individuals & families improves as a result of CE	3.992	3.936	4.000	4.096	0.414
28.5	5	Staff are empathetic and caring	3.992	4.006	4.048	3.926	0.666

* = SIGNIFICANT AT .05 LEVEL

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(TABLE 17, continued)

RANK	ITEM	POTENTIAL INDICATOR	TOTAL	USERS	KEYVOL	STAFF	PROB
29	25	Goals and objectives of the program are stated clearly	3.984	3.924	4.016	4.079	0.407
30	58	CE programs have positive social and/or economic consequences	3.978	3.865	4.017	4.169	0.042 *
31	16	Program meets recognized standards	3.970	3.915	3.983	4.076	0.438
32	51	Participants use the knowledge or skills gained	3.951	3.925	3.698	4.180	0.004 *
33	54	Participants feel confident in skills learned	3.933	3.936	3.852	4.023	0.454
34	56	Quality of life in communities improves as a result of CE	3.915	3.880	4.016	3.909	0.635
35	49	People report that they have learned something they intend to use later	3.898	3.884	3.836	3.966	0.700
36	22	Learners are able to try what's being taught	3.839	3.916	3.672	3.810	0.140
37	37	Learners feel involved	3.830	3.785	3.850	3.899	0.649
38	14	Publications and materials are professional in appearance	3.828	3.684	3.750	4.169	0.000 *
39	42	Program has the respect of community leaders	3.807	3.702	3.952	3.909	0.142
40	50	People learn a new skill	3.794	3.937	3.548	3.685	0.010 *
41	26	Goals and objectives of the program are stated in advance	3.773	3.753	3.823	3.775	0.902
42	32	Program builds on participants' experience and expertise	3.715	3.683	3.667	3.809	0.528
43	36	The advisory board is representative of the community	3.713	3.579	3.942	3.791	0.048 *
44	24	Clientele participate in evaluating programs	3.650	3.551	3.426	3.989	0.001 *
45	40	Participants receive personal attention	3.589	3.703	3.689	3.285	0.002 *
46	35	There is an active advisory board	3.567	3.582	3.900	3.310	0.004 *
47	31	Audiences participate actively	3.475	3.393	3.552	3.579	0.293
48	52	People change behavior as a result of the program	3.453	3.341	3.217	3.820	0.001 *
49	57	Personal or business financial status improves as a result of CE	3.445	3.396	3.362	3.590	0.344
50	47	People change attitudes as a result of the program	3.373	3.294	3.169	3.667	0.011 *
51	2	Staff have good academic credentials	3.319	3.237	3.525	3.337	0.222
52	34	Local people assist in directing the program	3.303	3.221	3.533	3.294	0.193
53	27	Staff and clientele jointly decide goals and objectives	3.285	3.259	3.443	3.222	0.414
54	23	Learners assist in planning programs	3.149	3.075	3.200	3.250	0.376
55	38	Community leaders are involved in developing programs	3.145	3.054	3.475	3.075	0.027 *
56	39	Community leaders assist in delivering programs	2.931	2.957	3.100	2.764	0.195
57	46	Participants often attend other Cooperative Extension programs	2.898	3.155	2.836	2.448	0.000 *

* = SIGNIFICANT AT .05 LEVEL

TABLE 18 INDICATORS BY RANK ORDER BY MEAN TOTAL RESPONSE AND MEAN GROUP RESPONSE

TOTAL			USERS			KEYVOL			STAFF		
Item	Rank	Mean	Item	Rank	Mean	Item	Rank	Mean	Item	Rank	Mean
1	1	4.639	1	1	4.633	1	1	4.587	19	1	4.816
19	2	4.628	19	2	4.551	19	2	4.583	17	2.5	4.685
17	3	4.492	17	3	4.434	45	3	4.452	1	2.5	4.685
8	4	4.429	8	4	4.407	17	4	4.377	8	3	4.551
45	5	4.405	33	5	4.335	20	5	4.342	33	4	4.539
33	6	4.370	45	6	4.330	8	6	4.317	45	5	4.522
20	7	4.328	48	7	4.322	9	7	4.300	12	6	4.500
48	8	4.289	20	8	4.250	7	8	4.274	20	7	4.472
12	9	4.275	4	9	4.233	3	9	4.270	44	8	4.461
4	10	4.260	44	10	4.170	12	10	4.262	13	9	4.452
44	11	4.251	12	11	4.168	4	11	4.242	7	10	4.427
13	12	4.230	13	12	4.146	33	12	4.222	53	11	4.420
7	13	4.216	21	13	4.131	21	13	4.186	29	12	4.337
9	14	4.186	18	14	4.117	6	14.5	4.177	15	13	4.333
53	15	4.168	10	15	4.105	44	14.5	4.177	48	14.5	4.326
3	16	4.147	7	16	4.090	15	15	4.175	9	14.5	4.326
21	17	4.127	9	17	4.075	13	16	4.153	4	14.5	4.326
15	18	4.120	3	18	4.069	48	17	4.143	28	15	4.264
6	19	4.106	53	19	4.052	53	18	4.131	43	16	4.258
18	20	4.092	28	20	4.033	10	19	4.115	30	17	4.239
10	21	4.080	41	21.5	4.023	43	20	4.095	6	18	4.224
41	22	4.071	6	21.5	4.023	41	21	4.049	3	19	4.213
28	23	4.064	5	22	4.006	5	22	4.048	41	20	4.182
43	24	4.061	11	23	3.994	58	23	4.017	51	21	4.180
29	25	4.057	15	24	3.981	25	24.5	4.016	18	22	4.176
30	26	4.026	29	25	3.952	56	24.5	4.016	14	23.5	4.169
11	27	4.018	30	26	3.951	55	25	4.000	58	23.5	4.169
55	28.5	3.992	43	27	3.948	16	26	3.983	11	24	4.157
5	28.5	3.992	50	28	3.937	42	27	3.952	55	25	4.096

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(TABLE 18, continued)

TOTAL			USERS			KEYVOL			STAFF		
Item	Rank	Mean	Item	Rank	Mean	Item	Rank	Mean	Item	Rank	Mean
25	29	3.984	54	29.5	3.936	36	28	3.942	21	26	4.080
58	30	3.978	55	29.5	3.936	30	29.5	3.934	25	27	4.079
16	31	3.970	51	30	3.925	29	29.5	3.934	16	28	4.076
51	32	3.951	25	31	3.924	18	30	3.902	54	29	4.023
54	33	3.933	22	32	3.916	35	31	3.900	10	30	4.006
56	34	3.915	16	33	3.915	11	32	3.887	24	31	3.989
49	35	3.898	49	34	3.884	28	33	3.873	49	32	3.966
22	36	3.839	56	35	3.880	54	34	3.852	5	33	3.926
37	37	3.830	58	36	3.865	37	35	3.850	56	34.5	3.909
14	38	3.828	37	37	3.785	49	36	3.836	42	34.5	3.909
42	39	3.807	26	38	3.753	26	37	3.823	37	35	3.899
50	40	3.794	40	39	3.703	14	38	3.750	52	36	3.820
26	41	3.773	42	40	3.702	51	39	3.698	22	37	3.810
32	42	3.715	14	41	3.684	40	40	3.689	32	38	3.809
36	43	3.713	32	42	3.683	22	41	3.672	36	39	3.791
24	44	3.65	35	43	3.582	32	42	3.667	26	40	3.775
40	45	3.589	36	44	3.579	31	43	3.552	50	41	3.685
35	46	3.567	24	45	3.551	50	44	3.548	47	42	3.667
31	47	3.475	57	46	3.396	34	45	3.533	57	43	3.590
52	48	3.453	31	47	3.393	2	46	3.525	31	44	3.579
57	49	3.445	52	48	3.341	38	47	3.475	2	45	3.337
47	50	3.373	47	49	3.294	27	48	3.443	35	46	3.310
2	51	3.319	27	50	3.259	24	49	3.426	34	47	3.294
34	52	3.303	2	51	3.237	57	50	3.362	40	48	3.285
27	53	3.285	34	52	3.221	52	51	3.217	23	49	3.250
23	54	3.149	46	53	3.155	23	52	3.200	27	50	3.222
38	55	3.145	23	54	3.075	47	53	3.169	38	51	3.075
39	56	2.931	38	55	3.054	39	54	3.100	39	52	2.764
46	57	2.896	39	56	2.957	46	55	2.836	46	53	2.448

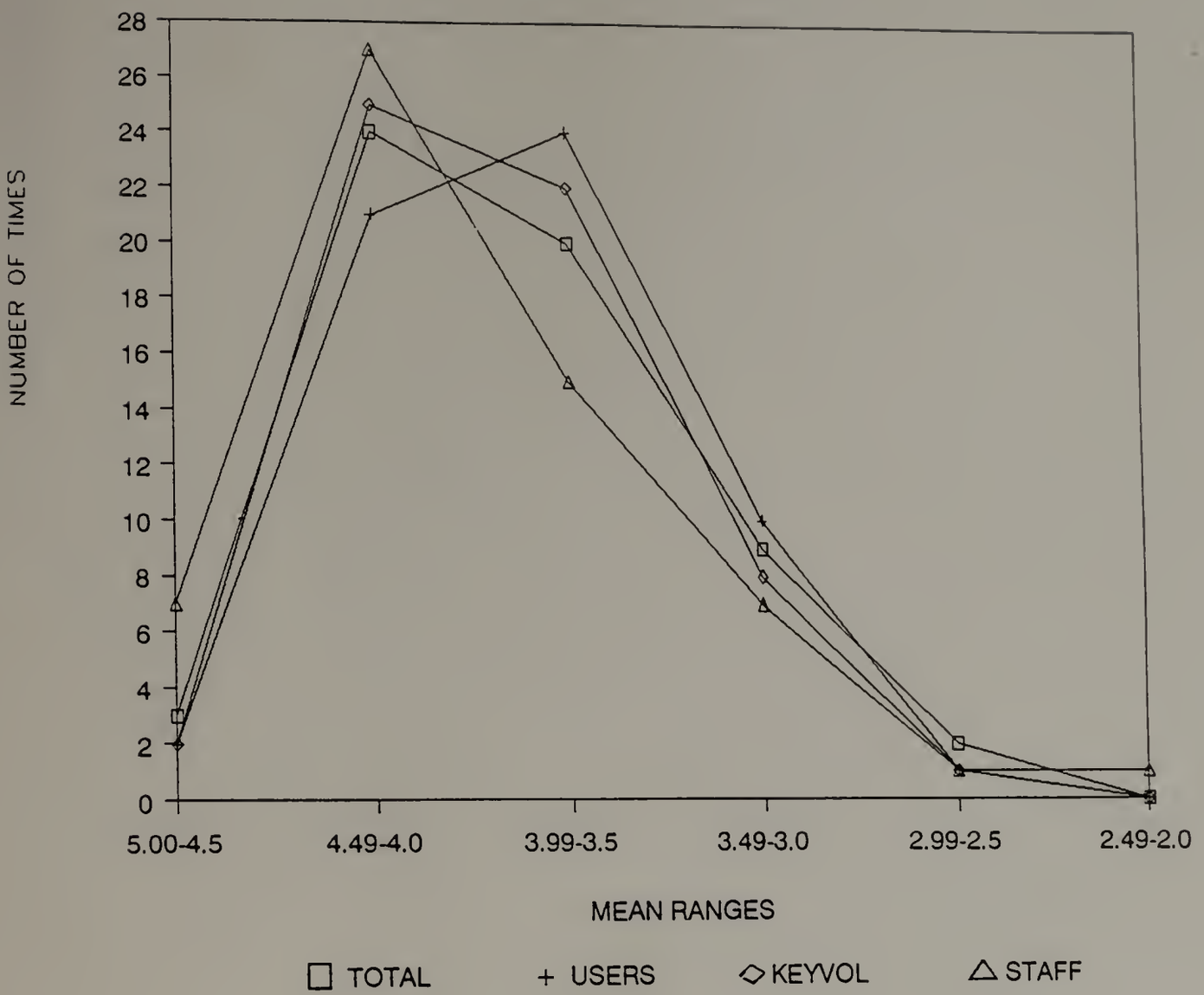

FIGURE 1 INDICATORS BY MEAN IMPORTANCE BY TOTAL AND GROUP RESPONSE

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATION

This chapter includes a summary of the study purpose, procedures and results. Further, conclusions are drawn from both the process and the results. Finally, recommendations for further study are offered.

Summary

The issue of quality is not a new one to education. Accreditation practices, studies by national and regional educational organizations, and graduate dissertations are among the tangible outcomes of the continuing interest in the indicators of quality of education in the United States. However, there is apparently little evidence of organized attention directed to the issue of quality in non-formal adult education.

The problem with which this study has been concerned is the apparent absence of attention in the literature to the quality of adult education, specifically how indicators of quality can be identified or developed. The major purpose of this study was to develop an operational definition of quality in non-formal adult education by testing a method for the development of indicators. A second purpose has been to identify quality indicators as perceived by participants or users, key volunteers, and staff in a specific

adult education program, Cooperative Extension. A third purpose has been to ascertain the degree to which these three groups agree or disagree on the indicators.

The research design consisted of three phases. First, individual and group interviews were conducted with ten staff, seven participants, and eight key volunteers in New York state and Massachusetts to identify potential indicators of quality. For Phase II, the transcribed interviews were reviewed by a panel of three experienced adult educators to identify the statements of indicators, which were combined with indicators from the literature into a survey instrument containing 58 potential indicators of quality.

The third phase consisted of administering the survey instrument by mail to three groups involved with Cooperative Extension in the state of Massachusetts. The total population of the membership of county Boards of Trustees, or 126 individuals comprised one group, key volunteers. A systematic random sample drawn from mailing lists maintained by six of the 14 county Cooperative Extension offices resulted in the names of 582 participants or users of Cooperative Extension. All county or field-based Cooperative Extension professional staff, totaling 114 at the time of the survey, constituted the staff sample.

After undeliverable mail was considered, the response rate was as follows: 183 users, or 33.51 percent; 63 key volunteers, or 50 percent; and 89 professional staff, or 78.07 percent. The total response rate was 42.62 percent.

The rating scale ranged from five, indicating "extremely important," to one, indicating "not important." Means were calculated for each potential indicator, first by the combined response of all three groups, and then by each group. Means were compared for between group differences by analysis of variance. Of the 58 proposed indicators, 25 had an apparent significant difference in mean importance ratings between groups. However, when the mean scores were used to develop ranks, there was considerable agreement among mean scores of the three groups on relative importance of indicators in the fourth and first quartiles. Agreement tended to be more dispersed in the second and third quartiles, with mean scores showing more commonalities between pairs of groups, than among all three groups.

No indicator was rated below 2.448, which placed it on the scale between three, "important," and two, "slightly important." Staff had a tendency to rate each indicator slightly higher in mean importance than did key volunteers or participants.

Factor analysis revealed six factors which were related to Bennett's Hierarchy, an evaluation model used nationally by Cooperative Extension and on which the survey instrument was organized. Listed below are the factors, with Bennett's levels in parentheses:

1. information delivery/communication process (activities)
2. people involvement (people involvement)
3. end results (end results)
4. organizational reputation (reactions)

5. knowledge, attitudes, skills and aspirations (KASA)
6. personal characteristics of staff (inputs)

Limitations Imposed by the Data

Based on the findings in this study, certain conclusions may be drawn. However, certain factors should be considered in interpreting the results.

First, the study population was drawn primarily from one state, and one Cooperative Extension system. Generalizations to other state systems should be made with caution.

Second, the response rate for users was low, although efforts were made to make this population sample as representative and responsive of current participants or users of Cooperative Extension in Massachusetts as possible. The response rate was, however, consistent with other similar studies where the topic was not highly salient to the potential respondents.

Third, the key volunteers in this study were a specific subset of all Cooperative Extension volunteers in the Commonwealth. Their designation as members of a county Cooperative Extension Board of Trustees, operating under the General Laws of the Commonwealth, may have influenced their perceptions differently than other volunteers in the Cooperative Extension system.

Fourth, only limited analysis was made of such variables as frequency of contact and association with a particular program area on the respondents' perception of

importance of the indicator. This was due in part to the size of the sample. There may be some differences dependent on these variables.

Conclusions

From the study results, which are reported in detail in Chapters III and IV, the following conclusions are drawn, in relation to the three specific questions addressed in this study.

Question 1: How can indicators of quality in non-formal adult education be identified or developed? Can a method be developed that is not overly complicated, with the potential for use by other adult educators? The multi-part method of interviews, use of expert judges, and comparison with the literature, is a workable method of developing or identifying indicators of quality in non-formal education. The interview component allows for early, direct, and individualized input, which is then refined through use of expert judges and comparison of the indicators to the literature. No special materials are needed. Only a moderate amount of time is needed for this process. Individual interviews are not complicated, since they are limited to one question. The recommended technique for group interviews, the Nominal Group Process, is easily learned, and is easily conducted. A small, but specific body of knowledge on such indicators is now available for comparison in future studies. Finally, the method employed is grounded in the

theories and concepts of social indicators, providing considerable credibility.

Question 2: What are indicators of quality in non-formal adult education as perceived by participants, staff, and key volunteers in an adult education program? From this study, it can be concluded that 56 of the 58 potential indicators are considered important to extremely important indicators of quality by the respondents in this study. The indicators rated most important based on combined mean scores, and which comprised the upper quartile, in order of importance were:

- Staff are competent in their technical area of expertise
- Information is accurate and reliable
- Information is current
- Staff have good communication skills
- Answers to questions are understandable
- Programs are designed to meet the needs of people
- Staff clearly explain ideas and concepts
- People gain new knowledge as a result of the program
- Program is credible
- Staff are creative and resourceful
- Questions are handled in a timely manner
- Clientele receive value
- Staff are effective teachers
- Staff strive for excellence
- Cooperative Extension addresses problems of real concern

The indicators in the top quartile cover all aspects of Cooperative Extension, from which it may be concluded that indicators of quality for the respondents in this study centered on the technical expertise of the staff and the way in which information is delivered. Programs that meet the needs of people and that are of real concern, coupled with value received, are also of major importance.

Question 3: To what extent do participants, staff, and key volunteers agree or disagree on indicators of quality for an adult education program? It can be concluded that, although there is some difference between the three groups on the degree of importance of certain items as indicators of quality based on mean scores, the same indicators are perceived of similar importance when rank ordered by their mean scores. The agreement on relative importance is most apparent in the upper and lower quartiles, with 60 to 66 percent agreement among the three groups of respondents. The second and third quartiles show much more variability, with agreement on overall placement more likely to occur between pairs of respondent groups.

Although there is a high degree of agreement among the mean scores of all three groups of the indicators in both the upper (60%) and lower (66%) quartiles, certain indicators in the upper quartile are related to the indicators in the lower quartile. For example, the highest ranked indicator, "Staff are competent in their technical area of expertise," is not unrelated to "Staff have good academic credentials." Although both call for judgments, it appears that more importance is placed on the observable behavior (technical competence), then the less visible academic credentials.

A major purpose of the study was to attempt to develop an operational definition of quality as it applied to non-

formal adult education. Based on the nine indicators in the upper quartile, the following definition is offered:

> "Technically competent staff clearly and skillfully and in a timely manner, communicate ideas, concepts and understandable answers to questions, based on current, accurate and reliable information via credible programs that meet the needs of people."

It is further concluded that "user-friendly" could be considered a shorthand version of an operational definition of quality in non-formal adult education. The focus on clientele is consistent with Guaspari's (1985) conclusion that customers know quality when they see it, but it is the organization's responsibility to set the standards to meet those expectations.

Recommendations

Several recommendations are made for further research, as well as for application of the findings and conclusions to the operation of Cooperative Extension.

First, the 58 indicators identified in this study should be assessed for importance by specific groups associated with Cooperative Extension to determine if group membership influences the way in which they view the importance of the indicators. Among these groups are:

Members of the University community, such as department chairmen within the College of Food and Natural Resources, and similar departments in Colleges of Agriculture and Home Economics at other land grant institutions in the United

States play a major role in providing support and a research base for Cooperative Extension programs. It would be useful to know what they perceive as indicating quality in Cooperative Extension. Do faculty who hold appointments as Extension specialists differ in their perception of quality from those faculty who are not Extension specialists?

The inability to judge the relative worth of faculty involvement with Cooperative Extension assignments causes difficulties when faculty members are reviewed for promotion and tenure. Knowing what department chairs and faculty think, are important dimensions of Cooperative Extension work may contribute to a mitigation of this problem.

Deans of Colleges of Agriculture and Home Economics and campus administrators such as Vice Presidents or Chancellors for Agriculture or University Extension, and University Presidents are major stakeholders relative to Cooperative Extension. An understanding of what they consider as quality would enable Cooperative Extension administrators to strengthen programs and other efforts to better match campus expectations.

Another major group of stakeholders are members of state legislatures, which provide from 30 to 70 percent of Cooperative Extension funding. If Cooperative Extension better understood what legislators think determines quality in Cooperative Extension, they could improve both programs and reporting systems, as well as narrative requests for funding.

Further, more specific study of users or participants should be undertaken to determine if there are major differences among users of specific programs or services. For example, all participants attending a particular series of topical workshops could constitute a study population. Further, as Cooperative Extension redirects its programming to new audiences, such as recent immigrants, participants in Employment Training programs, and limited income urban audiences, an effort should be made to assess their expectations of quality. It may be that different value systems arising from more diverse cultural and economic patterns may influence clientele expectations of quality. Based on general information about current staff, key volunteers and clientele on mailings lists, it may be assumed that there is more commonality of values relating to education than differences.

Finally, this study should be tried in other states using similar populations in order to continue to refine a baseline of indicators.

Second, the methodology employed in this study should be extended to other non-formal adult education systems. These include adult education programs in high schools, community colleges and universities. A variation on this would be to use the same instrument, substituting the name of the program for the term Cooperative Extension.

Third, the same methodology should be tested with those formal adult education systems, particularly credit continuing education in community colleges and universities.

Fourth, the indicators in this study should be used to actually assess the quality of a non-formal adult education system, such as Cooperative Extension. For example, the impressions of participants who are relatively new to Cooperative Extension could be compared to frequent users on the actual quality of specific programs and services. It is recommended that such a study be limited to very defined populations who have common experiences with Cooperative Extension, in terms of types of program content and delivery.

Another application of this study should be to use the indicators as the basis for a Cooperative Extension program review modeled after the higher education accreditation process. For example, documentation or evidence for each indicator should be assembled, i.e., academic credentials and performance evaluations could be examined to assess staff competencies; clientele evaluations reviewed for end results; rosters of advisory boards studied for clientele participation; etc. A team consisting of two to three knowledgeable users, several key volunteers and staff from other Cooperative Extension systems should then review the assembled documentation to make an assessment of the level of quality.

Staff should apply the indicators in the top quartile as a self-assessment tool to monitor their current and future program activities, as well as their own competencies. Extension administrators should review the top 15 indicators as possible measures when considering staff promotions, as well as when changes in programs such as expansion or termination are under consideration.

Extension administrators should undertake discussions and dialogue on quality with key volunteers at their monthly meetings to further explore the top quartile of indicators and to develop more concrete measures of evidence for each indicator.

With the emphasis placed on information delivery and communication processes by all groups, Cooperative Extension should devote increased attention to program methodology. Are staff effective teachers and skillful communicators? Skilled observation of actual program delivery techniques should be increased, and should be combined with staff development activities such as introduction to Extension Education, theories and styles of adult learning, use of educational technology and instructional design. Staff should be hired with and expected to maintain competencies in various program delivery modes.

With the emphasis clientele place on information delivery and knowledge gain, rather than behavior change or specific outcomes of Extension programs, some consideration should be given to the focus of summative evaluations.

Recently, these have addressed specific behavior changes or impacts that can be attributed to the Extension programs. It may be that if clientele participate in Cooperative Extension programs and activities for information or knowledge, they may or may not have a specific application of that information or knowledge in mind. This is an area that needs further exploration.

Since the mean score of users for the indicator "staff have good academic credentials" placed it 51st, while the mean score of same group placed "staff are competent in their technical area of expertise" first, the concepts of staffing with trained paraprofessionals and master volunteers may be more widely accepted by clientele than Cooperative Extension realizes. This may be a case where clientele recognize quality, yet are not aware that the individuals who answer their questions or conduct programs, while technically competent because of experience and intensive training by Cooperative Extension, often do not have academic degrees. This should be an area for further exploration to test this hypothesis.

Finally, Cooperative Extension needs to foster the concept advanced by Guaspari (1985), that quality is everyone's job, and management's responsibility by listening to clientele and key volunteers, and translating their expectations for quality into standards, support and reward systems for the entire organization.

APPENDIX A

LIST OF EXPERT JUDGES

LIST OF EXPERT JUDGES

Duane D. Dale, Ed.D.

State Specialist in Community Resource Development
Cooperative Extension
University of Massachusetts
Amherst, MA

Thomas Patterson, Ph.D.

Chair, Department of Vocational and Extension Education
University of Vermont
Burlington, VT

Charles Yergatian, M.S., A.B.D.

Director, Suburban Experiment Station and Extension Center
University of Massachusetts
Waltham, MA

APPENDIX B

INSTRUMENT AND LETTER TO USERS

HOW IMPORTANT ARE THE FOLLOWING STATEMENTS IN MEASURING THE QUALITY OF COOPERATIVE EXTENSION PROGRAMS? (For each statement, please circle the number to the right that best represents your opinion.)

5 - EXTREMELY IMPORTANT
4 - VERY IMPORTANT
3 - IMPORTANT
2 - SLIGHTLY IMPORTANT
1 - NOT IMPORTANT
DK - DON'T KNOW or NO OPINION

	EXTREMELY IMPORTANT			NOT IMPORTANT		
1. Staff are competent in their technical area of expertise...	5	4	3	2	1	DK
2. Staff have good academic credentials.....	5	4	3	2	1	DK
3. Staff are dynamic and enthusiastic.....	5	4	3	2	1	DK
4. Staff are creative and resourceful.....	5	4	3	2	1	DK
5. Staff are empathetic and caring.....	5	4	3	2	1	DK
6. Staff put clientele first.....	5	4	3	2	1	DK
7. Staff are effective teachers...	5	4	3	2	1	DK
8. Staff have good communication skills.....	5	4	3	2	1	DK
9. Staff strive for excellence....	5	4	3	2	1	DK
10. Staff provide leadership to solve problems.....	5	4	3	2	1	DK
11. Program has a good reputation..	5	4	3	2	1	DK
12. Program is credible.....	5	4	3	2	1	DK
13. Clientele receive value.....	5	4	3	2	1	DK
14. Publications and materials are professional in appearance...	5	4	3	2	1	DK
15. Program is adequately funded...	5	4	3	2	1	DK
16. Program meets recognized standards.....	5	4	3	2	1	DK
17. Information is current.....	5	4	3	2	1	DK
18. Information is based on research.....	5	4	3	2	1	DK
19. Information is accurate and reliable.....	5	4	3	2	1	DK
20. Staff clearly explain ideas and concepts.....	5	4	3	2	1	DK

HOW IMPORTANT ARE THE FOLLOWING STATEMENTS IN MEASURING THE QUALITY OF COOPERATIVE EXTENSION PROGRAMS? (For each statement please circle the number to the right that best represents your opinion.)

	EXTREMELY IMPORTANT				NOT IMPORTANT	
21. Programs carry out mission of Cooperative Extension	5	4	3	2	1	DK
22. Learners are able to try what's being taught	5	4	3	2	1	DK
23. Learners assist in planning programs	5	4	3	2	1	DK
24. Clientele participate in evaluating programs	5	4	3	2	1	DK
25. Goals and objectives of the program are stated clearly	5	4	3	2	1	DK
26. Goals and objectives of the program are stated in advance	5	4	3	2	1	DK
27. Staff and clientele jointly decide goals and objectives	5	4	3	2	1	DK
28. Activities suit the topic	5	4	3	2	1	DK
29. Activities suit the audience	5	4	3	2	1	DK
30. Programs address important problems or issues	5	4	3	2	1	DK
31. Audiences participate actively	5	4	3	2	1	DK
32. Program builds on participants' experience and expertise	5	4	3	2	1	DK
33. Programs are designed to meet the needs of people	5	4	3	2	1	DK
34. Local people assist in directing the program	5	4	3	2	1	DK
35. There is an active advisory board	5	4	3	2	1	DK
36. The advisory board is representative of the community	5	4	3	2	1	DK
37. Learners feel involved	5	4	3	2	1	DK
38. Community leaders are involved in developing programs	5	4	3	2	1	DK
39. Community leaders assist in delivering programs	5	4	3	2	1	DK
40. Participants receive personal attention	5	4	3	2	1	DK
41. Participants are positive about the program	5	4	3	2	1	DK

HOW IMPORTANT ARE THE FOLLOWING STATEMENTS IN MEASURING THE QUALITY OF COOPERATIVE EXTENSION PROGRAMS? (For each statement, please circle the number to the right that best represents your opinion.)

	EXTREMELY IMPORTANT				NOT IMPORTANT	
42. Program has the respect of community leaders	5	4	3	2	1	DK
43. Unsolicted feedback from participants is welcome	5	4	3	2	1	DK
44. Questions are handled in a timely manner	5	4	3	2	1	DK
45. Answers to questions are understandable	5	4	3	2	1	DK
46. Participants often attend other Cooperative Extension programs	5	4	3	2	1	DK
47. People change attitudes as a result of the program	5	4	3	2	1	DK
48. People gain new knowledge as a result of the program	5	4	3	2	1	DK
49. People report that they have learned something that they intend to use later	5	4	3	2	1	DK
50. People learn a new skill	5	4	3	2	1	DK
51. Participants use the knowledge or skills gained	5	4	3	2	1	DK
52. People change behavior as a result of the program	5	4	3	2	1	DK
53. Cooperative Extension addresses problems of real concern	5	4	3	2	1	DK
54. Participants feel confident in skills learned	5	4	3	2	1	DK
55. Quality of life for individuals and families improves as a result of Extension	5	4	3	2	1	DK
56. Quality of life in communities improves as a result of Cooperative Extension	5	4	3	2	1	DK
57. Personal or business financial status improves as a result of Cooperative Extension	5	4	3	2	1	DK
58. Cooperative Extension programs have positive social and/or economic consequences	5	4	3	2	1	DK

B. HOW FREQUENTLY WOULD YOU ESTIMATE THAT YOU HAVE CONTACT WITH COOPERATIVE EXTENSION? (phone, mail, meetings, etc.) Please circle only one.

1. less than once a month
2. once a month
3. two - five times a month
4. more than five times a month

C. HOW LONG DO YOU ESTIMATE THAT YOU HAVE USED COOPERATIVE EXTENSION PROGRAMS OR SERVICES? (publications, meetings, consultation by phone, etc.) Please circle only one.

1. less than one year
2. 1 - 2 years
3. 3 - 5 years
4. 6 - 10 years
5. 11 - 20 years
6. more than 20 years

D. FROM WHICH OF THE FOLLOWING DEPARTMENTS ARE YOU MOST LIKELY TO RECEIVE INFORMATION AND PROGRAM ANNOUNCEMENTS? Please circle only one.

1. Agriculture
2. Home Economics
3. 4-H
4. Community Developement/Natural Resources
5. Expanded Food and Nutrition Program (EFNEP)

E. WHAT IS YOUR ZIP CODE? _____

==========THANK YOU VERY MUCH==========

All replies will be kept confidential.

Please return in the enclosed postage paid envelope

by November 15, 1988

Trish C. Sacks, Program Director
Cooperative Extension, 216 Stockbridge Hall
University of Massachusetts, Amherst, MA 01003-0099

October 28, 1988

Dear User of Cooperative Extension,

Quality is often used as the main point in advertising by both large and small businesses. You can certainly think of advertising that suggests that you choose a product based on quality. Quality is also a word we hear quite frequently when discussing our children's schooling.

Cooperative Extension is also concerned about quality. We hope that as a user of Cooperative Extension, you will take part in a study to help us better understand quality as it relates to Cooperative Extension.

The purpose of the study is to better define proposed criteria or indicators of quality. We are asking for your opinion of how important each indicator is in determining the quality of Cooperative Extension programs.

Please, do not rate an Extension program(s). This study is an attempt to develop a list that in the future could be used to evaluate programs, in order that we could improve and strengthen them. In looking at the list, the question to consider is: "How important is this item in measuring the quality of Cooperative Extension programs?"

Because you have participated in a program, subscribed to a newsletter, or used other services offered by Cooperative Extension, your opinion will be extremely valuable to the study.

Thank you for taking time to participate in this study. Please return the study in the postage paid envelope by November 15, 1988. The number on the form is for tabulation purposes only; in no way will your name be identified with the survey, and all responses will be treated with total confidence. All data will be combined prior to analysis.

Cordially,

Trish C. Sacks
Program Director

APPENDIX C

INSTRUMENT AND LETTER TO KEY VOLUNTEERS

HOW IMPORTANT ARE THE FOLLOWING STATEMENTS IN MEASURING THE QUALITY OF COOPERATIVE EXTENSION PROGRAMS? (For each statement, please circle the number to the right that best represents your opinion.)

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5. 11 - 20 years
6. more than 20 years

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2. Home Economics
3. 4-H
4. Community Developement/Natural Resources
5. Expanded Food and Nutrition Program (EFNEP)

E. WHAT IS YOUR ZIP CODE? _____

==========THANK YOU VERY MUCH==========

All replies will be kept confidential.

Please return in the enclosed postage paid envelope

by November 15, 1988

Trish C. Sacks, Program Director
Cooperative Extension, 216 Stockbridge Hall
University of Massachusetts, Amherst, MA 01003-0099

October 28, 1988

Dear Trustee,

Quality is often used as the main point in advertising by both large and small businesses. You can certainly think of advertising that suggests that you choose a product based on quality. Quality is also a word we hear quite frequently when discussing our children's schooling.

Cooperative Extension is also concerned about quality. We hope that as a user of Cooperative Extension, you will take part in a study to help us better understand quality as it relates to Cooperative Extension.

The purpose of the study is to better define proposed criteria or indicators of quality. We are asking for your opinion of how important each indicator is in determining the quality of Cooperative Extension programs.

Please, do not rate an Extension program(s). This study is an attempt to develop a list that in the future could be used to evaluate programs, in order that we could improve and strengthen them. In looking at the list, the question to consider is: "How important is this item in measuring the quality of Cooperative Extension programs?"

Your opinion as a current or former member of the Board of Trustees will be extremely valuable to the study.

Thank you for taking time to participate in this study. Please return the study in the postage paid envelope by November 15, 1988. The number on the form is for tabulation purposes only; in no way will your name be identified with the survey, and all responses will be treated with total confidence. All data will be combined prior to analysis.

Cordially,

Trish C. Sacks
Program Director

APPENDIX D

INSTRUMENT AND LETTER TO STAFF

HOW IMPORTANT ARE THE FOLLOWING STATEMENTS IN MEASURING THE QUALITY OF COOPERATIVE EXTENSION PROGRAMS? (For each statement, please circle the number to the right that best represents your opinion.)

5 - EXTREMELY IMPORTANT
4 - VERY IMPORTANT
3 - IMPORTANT
2 - SLIGHTLY IMPORTANT
1 - NOT IMPORTANT
DK - DON'T KNOW or NO OPINION

	EXTREMELY IMPORTANT			NOT IMPORTANT		
1. Staff are competent in their technical area of expertise...	5	4	3	2	1	DK
2. Staff have good academic credentials.....	5	4	3	2	1	DK
3. Staff are dynamic and enthusiastic.....	5	4	3	2	1	DK
4. Staff are creative and resourceful.....	5	4	3	2	1	DK
5. Staff are empathetic and caring.....	5	4	3	2	1	DK
6. Staff put clientele first.....	5	4	3	2	1	DK
7. Staff are effective teachers...	5	4	3	2	1	DK
8. Staff have good communication skills.....	5	4	3	2	1	DK
9. Staff strive for excellence....	5	4	3	2	1	DK
10. Staff provide leadership to solve problems.....	5	4	3	2	1	DK
11. Program has a good reputation..	5	4	3	2	1	DK
12. Program is credible.....	5	4	3	2	1	DK
13. Clientele receive value.....	5	4	3	2	1	DK
14. Publications and materials are professional in appearance...	5	4	3	2	1	DK
15. Program is adequately funded...	5	4	3	2	1	DK
16. Program meets recognized standards.....	5	4	3	2	1	DK
17. Information is current.....	5	4	3	2	1	DK
18. Information is based on research.....	5	4	3	2	1	DK
19. Information is accurate and reliable.....	5	4	3	2	1	DK
20. Staff clearly explain ideas and concepts.....	5	4	3	2	1	DK

HOW IMPORTANT ARE THE FOLLOWING STATEMENTS IN MEASURING THE QUALITY OF COOPERATIVE EXTENSION PROGRAMS? (For each statement please circle the number to the right that best represents your opinion.)

	EXTREMELY IMPORTANT				NOT IMPORTANT	
21. Programs carry out mission of Cooperative Extension	5	4	3	2	1	DK
22. Learners are able to try what's being taught	5	4	3	2	1	DK
23. Learners assist in planning programs	5	4	3	2	1	DK
24. Clientele participate in evaluating programs	5	4	3	2	1	DK
25. Goals and objectives of the program are stated clearly	5	4	3	2	1	DK
26. Goals and objectives of the program are stated in advance	5	4	3	2	1	DK
27. Staff and clientele jointly decide goals and objectives	5	4	3	2	1	DK
28. Activities suit the topic	5	4	3	2	1	DK
29. Activities suit the audience	5	4	3	2	1	DK
30. Programs address important problems or issues	5	4	3	2	1	DK
31. Audiences participate actively	5	4	3	2	1	DK
32. Program builds on participants' experience and expertise	5	4	3	2	1	DK
33. Programs are designed to meet the needs of people	5	4	3	2	1	DK
34. Local people assist in directing the program	5	4	3	2	1	DK
35. There is an active advisory board	5	4	3	2	1	DK
36. The advisory board is representative of the community	5	4	3	2	1	DK
37. Learners feel involved	5	4	3	2	1	DK
38. Community leaders are involved in developing programs	5	4	3	2	1	DK
39. Community leaders assist in delivering programs	5	4	3	2	1	DK
40. Participants receive personal attention	5	4	3	2	1	DK
41. Participants are positive about the program	5	4	3	2	1	DK

HOW IMPORTANT ARE THE FOLLOWING STATEMENTS IN MEASURING THE QUALITY OF COOPERATIVE EXTENSION PROGRAMS? (For each statement, please circle the number to the right that best represents your opinion.)

	EXTREMELY IMPORTANT				NOT IMPORTANT	
42. Program has the respect of community leaders	5	4	3	2	1	DK
43. Unsolicted feedback from participants is welcome	5	4	3	2	1	DK
44. Questions are handled in a timely manner	5	4	3	2	1	DK
45. Answers to questions are understandable	5	4	3	2	1	DK
46. Participants often attend other Cooperative Extension programs	5	4	3	2	1	DK
47. People change attitudes as a result of the program	5	4	3	2	1	DK
48. People gain new knowledge as a result of the program	5	4	3	2	1	DK
49. People report that they have learned something that they intend to use later	5	4	3	2	1	DK
50. People learn a new skill	5	4	3	2	1	DK
51. Participants use the knowledge or skills gained	5	4	3	2	1	DK
52. People change behavior as a result of the program	5	4	3	2	1	DK
53. Cooperative Extension addresses problems of real concern	5	4	3	2	1	DK
54. Participants feel confident in skills learned	5	4	3	2	1	DK
55. Quality of life for individuals and families improves as a result of Extension	5	4	3	2	1	DK
56. Quality of life in communities improves as a result of Cooperative Extension	5	4	3	2	1	DK
57. Personal or business financial status improves as a result of Cooperative Extension	5	4	3	2	1	DK
58. Cooperative Extension programs have positive social and/or economic consequences	5	4	3	2	1	DK

B. HOW LONG HAVE YOU BEEN EMPLOYED BY COOPERATIVE EXTENSION INCLUDING EMPLOYMENT IN MASSACHUSETTS AND IN OTHER STATES? Please circle only one.

1. less than one year
2. 1 - 2 years
3. 3 - 5 years
4. 6 - 10 years
5. 11 - 20 years
6. more than 20 years

C. PRIOR TO "PRIORITY INITIATIVE PROGRAMMING," IN WHICH ONE PROGRAM AREA HAVE YOU DONE MOST OF YOUR WORK? Please circle only one.

1. Agriculture
2. Home Economics
3. 4-H
4. CRD/NR
5. EFNEP

D. IN WHICH OF THE FOLLOWING CATEGORIES DOES YOUR HIGHEST ACADEMIC DEGREE BEST FIT? Please circle only one.

1. Agriculture
2. Home Economics
3. Education
4. Social Sciences
5. Natural Sciences
6. Business
7. Humanities
8. Other

==========THANK YOU VERY MUCH==========

All replies will be kept confidential.

Please return in the enclosed postage paid envelope

by November 15, 1988

Trish C. Sacks, Program Director
Cooperative Extension, 216 Stockbridge Hall
University of Massachusetts, Amherst, MA 01003-0099

October 28, 1988

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Your opinion as a professional staff member will be extremely valuable to the study.

Thank you for taking time to participate in this study. Please return the study in the postage paid envelope by November 15, 1988. The number on the form is for tabulation purposes only; in no way will your name be identified with the survey, and all responses will be treated with total confidence. All data will be combined prior to analysis.

Cordially,

Trish C. Sacks
Program Director

APPENDIX E

FOLLOW-UP POSTCARD

November 17, 1988

Several weeks ago a questionnaire seeking your opinion on aspects of quality in Cooperative Extension was mailed to you. Your name was drawn in a random sample from Extension mailing lists. If you have already completed and returned the survey, please accept my sincere thanks.

If not, this brief note is to request your participation. Your opinion is very important if the results are to reflect opinions of those who use Cooperative Extension.

The survey takes less than 12 minutes to complete and the deadline has been extended to November 25. I look forward to your reply.

Cordially

Program Director

BIBLIOGRAPHY

Abdel-Rehim, Saber Mostafa. "Clientele and Council Officer Perceptions of the Missouri Extension Service." Ph.D. Dissertation. University of Missouri, Columbia, 1983.

Allen, Terry, et al. editors. Priorities for Action: Final Report of the Carnegie Commission on Higher Education. New York: McGraw Hill Book Company, 1973.

Allen, T. Harrell. New Methods in Social Science Research. New York: Praeger Publishers, 1978.

Andrews, Frank and Withey, Stephen B. Social Indicators of Well Being. New York: Plenum Press, 1976.

Apps, Jerold W. Problems in Continuing Education. New York: McGraw-Hill Book Company, 1979.

Apps, Jerold W. Improving Practice in Continuing Education. San Francisco: Jossey-Bass, Inc., 1985

Armstrong, J. Scott. Long Range Forecasting. New York: John Wiley and Sons, 1978.

Asimov, Issac. Foundation. New York: Avon, 1951.

Astin, Alexander W. and Solomon, Lewis C. "Part Two: The Quality of Undergraduate Education. Are Reputational Ratings Needed to Measure Quality?" Change. Volume 13, No. 7: 14 -24. October, 1981.

Astin, Alexander W. and Solmon, Lewis. "Measuring Academic Quality: An Interim Report." Change. Vol. 11, No. 6: 4851. 1979.

Bauer, Raymond A., Editor. Social Indicators. Cambridge, MA: The M.I.T. Press, 1966.

Benedict, Larry G. "Traditional Research versus Evaluation." Amherst: University of Massachusetts. undated, mimeo.

Benson, Charles S. "The Question of Quality." VocEd. Vol. 57, No. 6: 27-29, 55. September 1982.

Boone, Edgar J., Shearson, Ronald W., White, Estelle E. and Associates. Serving Personal and Community Needs Through Adult Education. San Francisco: Jossey-Bass Publishers, 1980.

Borich, Gary A., editor. Evaluating Educational Programs and Products. Englewood Cliffs, N. J.: Educational Technology Publications, 1974.

Bowen, Frank, et al. "The Identification of Decisionmakers Concerned With Nontraditional Degree Programs and an Analysis of Their Information Needs" in An Evaluative Look at Nontraditional Postsecondary Education. Papers prepared in 1977 by the Center for Research and Development in Higher Education of the University of California, Berkely. Washington, D.C.: U.S. Government Printing Office, 1979.

Bradburn, Norman M. and Sudman, Seymour. Improving Interview Method and Questionnaire Design. San Francisco: Jossey-Bass, Inc., 1980.

Brown, M. Alan and Copeland, Harlan G., editors. Attracting Able Instrutors of Adults. San Francisco: Jossey-Bass, Inc., 1979.

Cameron, Kim S. "Assessing Institutional Ineffectiveness: A Strategy for Improvement" in Designing Academic Program Reviews. Richard Wilson, editor. San Francisco: Jossey-Bass, Inc., 1982.

Cappell, Charles and Mays, Karlene L. The Correlated Structure of Child Abuse: Advances Toward a Social Indicator Model. Chicago: University of Illinois, 1973. (ERIC ED155527).

Carter, K., et al. Social Indicators for Rural Development - A Descriptive Social Report. Ames, Iowa: Agricultural and Home Economics Experiment Station, Iowa State University. November, 1977. (ERIC ED187486).

Chambers, Robert H. "Enchancing Campus Quality Through Self-Study" in Designing Academic Program Reviews. Robert Wilson, editor. San Francisco: Jossey-Bass, Inc., 1982.

Clewett, Robert L. and Olson, Jerry C., Editors. Social Indicators And Marketing. New York: American Marketing Association, 1974.

Cohn, Roy B. "To Be or Not To Be?: A Method for Evaluating Academic Support Units." Planning for Higher Education. Vol. 8: 11-13. Special Issue, Winter 1979.

Coleman, A. Lee. Quality of Life: How Community Leaders and Ordinary Residents Assess Various Aspects of Life in Four Kentucky Mountain Counties. Louisville, Kentucky: University of Kentucky. Kentucky Agricultural Experiment Station Report RS 45. 1975. (ERIC ED137006).

Collazo, Andres, et al. Forecasts of Selected Social Indicators of Educational Outcomes and Recommended Policy Changes. Final Report for the Florida State Board of Regents. Tallahassee: University of Florida, 1976. (ERIC ED131583).

College Entrance Examination Board. Lifelong Learning During the Adulthood. A report of the Advisory Panel on Research Needs in Lifelong Learning during Adulthood. New York, 1978 (a).

College Entrance Examination Board. Future Directions for a Learning Society. New York, 1978 (b).

Cross, K. Patricia and McCartan, Anne-Marie. Adult Education: State Policies and Institutional Practices. Washington, D.C.: Association for the Study of Higher Education, 1984.

Crosson, Patricia H. Public Service in Higher Education: Practices and Priorities. ASHE-ERIC Higher Education Research Report No. 7. Washington, D.C.: Association for the Study of Higher Education, 1983.

Datta, Lois-Ellin, ed. Evaluation in Change - Meeting New Government Needs. Beverly Hills: Sage Publications, Inc., 1981.

Delbecq, Andre, et al. Group Techniques for Program Planning. Glenview, IL: Scott, Foresman and Company, 1975.

de Neufville, Judith Innes. Social Indicators and Public Policy. New York: Elsevier Scientific Publishing Company, 1975.

Educational Testing Service. Educational Indicators: Monitoring the State of Education. Proceedings of the ETS 36th Invitational Conference. Princeton, New Jersey, November 1975. (ERIC ED150147).

Elliot, Elizabeth. Social Indicators and Program Evaluation. Paper presented at the Adult Education Research Conference, St. Louis, April, 1975. (ERIC ED110 852).

Elliott, Elizabeth, Boyle, Patrick, and Ralston, Betty Lou. "Final Report - Cooperative Evaluation Project in Home Economics." Madison: University of Wisconsion - Extension and The Extension Service, USDA, 1977.

Enarson, Harold L. "Quality - Indefinable But Not Unattainable." Educational Record. Vol. 64, No. 1: 7-9. Winter 1983.

Fetterman, Elsie. Economic Worth of Household-Produced Goods and Services. Amherst, MA: Cooperative Extension, University of Massachusetts. 1984.

Finsterbusch, Kurt and Wolf, C.P., Editors. Methodology of Social Impact Assessment. Second Edition. Stroudsburg, Pennsylvannia: Hutchinson Ross Publishing Company, 1981.

Fischer, Frank. Politics, Values, and Public Policy: The Problem of Methodology. Boulder, Colorado: Westview Press, 1980.

Flynn, Cynthia and Schmidt, Rosemary. Sources of Information for Social Profiling. A Report Submitted to the U.S. Army Institute for Water Resources. Springfield, Virginia: National Technical Information Service, 1977.

Fox, Karl A. Social Indicators and Social Theory. New York: John Wiley & Sons, 1974.

Franklin, Jack L. and Thrasher, Jean H. An Introduction to Program Evaluation. New York: John Wiley & Sons, 1976.

George, Melvin D. "Assessing Program Quality" in Designing Academic Program Reviews. Richard Wilson, editor. San Francisco: Jossey-Bass, Inc., 1982.

Gilder, Jamison, editor. Modernizing State Policies: Community Colleges and Lifelong Education. Washington, D.C.: American Association of Community and Junior Colleges, 1981.

Grady, Michael J. "Using Educational Indicators for Program Accountability." Cooperative Acccountability Project. Denver: Grady Research Associates, September 1974. (ERIC ED096740).

Gross, Ronald. Future Directions for Open Learning. A Report on an Invitational Conference on Open Learning Programs. Washington, D.C.: U.S. Government Printing Office, 1979.

Guarspari, John. I Know It When I See It. New York: American Management Association, 1985.

Hamburger, Polia Lerner. Social Indicators - A Marketing Perspective. New York: American Marketing Association, 1974.

Harrington, Fred Harvey. The Future of Adult Education. San Francisco: Jossey-Bass, 1977.

Henderson, D.H. Social Indicators - A Rationale and Research Framework. Ottawa, Canada: Information Canada, 1974.

Houle, Cyril O. The Inquiring Mind. Madison: The University of Wisconsin Press, 1961.

Issac, Stephen. Handbook in Research and Evaluation. San Diego, Calif: Robert R. Knapp, Publisher, 1971.

Jaeger, Richard. "An Abundance of Answers in Search of Questions on a Methodology of Asssesment Through Indicators." Paper presented at the 61st Annual Meeting of the American Education Research Association. N.Y., 1977. (ERIC ED135872).

Johnson, Denis F. "Social Indicators and Social Forecasting." Paper presented at the Annual Meeting of the American Sociological Association, Boston, August 27-31, 1979. (ERIC ED178444).

Johnstone, James. Indicators of the Performance of Educational Systems. Paris: UNESCO. International Institute for Educational Planning, 1973. (ERIC ED139063).

Kammerman, Shelia. Developing a Family Impact Statement. New York: Foundation for Child Development, May 1976. Occasional Paper. (ERIC ED130801).

Kantner, David L. "An Assessment of Extension Agricultural Programs as Perceived by Clientele." Ed.D. Dissertation, The Pennsylvannia State University, 1980.

Kantner, David L. "How Agents and Clients View Programs." Journal of Extension. Volume XX: 4-9. May/June 1982.

Katzner, Donald. Choice and the Quality of Life. Beverly Hills, California: Sage Publications, Inc., 1979.

Kauffman, Joseph F. "Assessing the Quality of Student Services" in Determining the Effectiveness of Campus Services. Robert Scott, editor. San Francisco: Jossey-Bass, Inc. 1984.

Keeton, Morris T., editor. Defining and Assuring Quality in Experimental Learning. San Francisco: Jossey-Bass, Inc., 1980.

Kirk, Robert J. Building Quality into Adult and Continuing Education. Rockville, Md.: Learntech Publications, 1981.

Knowles, Malcolm S., ed. Handbook of Adult Education in the United States. Chicago: Adult Education Association of the U.S.A., 1960.

Knowles, Asa S., editor-in-chief. The International Encyclopedia of Higher Education. Volume 7. San Francisco: Jossey-Bass Publishers, 1977.

Knox, Alan B., editor. Assessing the Impact of Continuing Education. San Francisco: Jossey-Bass, Inc., 1979.

Knox, Alan. Adult Development and Learning. San Francisco: Jossey-Bass Publishers, 1978.

Kovar, Edward B., editor. Major Health Problems in Massachusetts. Boston: Massachusetts Public Health Association, 1980.

Kowalski-Firestone, Beverly. "Measuring Success and Maintaining Quality: Academic Program Plannning and Reviw at the University of Wisconsin-Parkside." Planning for Higher Education. Vol. 11, No. 1: 5-13. 1982.

La Follette, Marcel Chotkowski, editor. Quality in Science. Cambridge, Massachusetts: The MIT Press, 1982.

Labaw, Patrica J. Advanced Questionnaire Design. Cambridge: Abt Books, 1980.

Langerman, Philip D. and Smith, Douglas. Managing Adult and Continuing Education Programs and Staff. Washington, D.C.: National Association for Public Continuing and Adult Education, 1979.

Levine, Arthur E. "Quality in Baccalaurate Programs: What to Look for When David Riesman Can't Visit." Educational Record Volume 63, No. 1: 13-18. Winter 1982.

Linquist, Jack, ed. Increasing the Impact of Social Organizations by Grantmaking Organizations. Battle Creek, Michigan: W. K. Kellogg Foundation, 1979.

Long, Huey B. Adult and Continuing Education: Responding to Change. New York: Teachers College Press, 1983.

Lyndon B. Johnson School of Public Affairs. Community Indicators: Improving Community Management. Austin, Texas: University of Texas, 1974.

Mancini, Jay A. Social Indicators of Family Life Satisfaction. Paper presented at a meeting of the National Council on Family Relations, Philadelphia. October, 1978. (ERIC ED169423).

Marans, Robert, et al. Perceptions of Life Quality in Rural America: An Analysis of Survey Data from Four Studies. Ann Arbor: Survey Research Center, Institute for Social Research, University of Michigan, 1980. (ERIC ED 196623).

Meeth, L. Richard. Quality Education for Less Money. San Francisco: Jossey-Bass Publishers, 1974.

Michalos, Alex C. North American Social Report - A Comparative Study of the Quality of Life in Canada and the USA from 1964 to 1974. Volume Three. "Science, Education, and Recreation." Dordrecht, Holland: D. Riedel Publishing Company, 1981.

Miller, Roberta B. "Social Indicators: Tools for Evaluation or for the Study of Social Change." Paper presented at the 1977 Annual Meetings of the American Educational Research Association and the National Council on Measurement in Education. New York. (ERIC ED138626)

Milord, James T. "Human Service Needs Assessment: Three Non-Epidemiological Approaches". Canadian Psychological Review. Volume 17, No. 4: 260-268. October 1976.

Nontask, Tatree and Frese, Wolfgang. Objective and Subjective Quality of Life Indicators: An Exploratory Analysis. Paper presented at meeting of Southern Agricultural Scientists, Houston, February, 1978. (ERIC ED 158949)

Olsen, Marvin and Merwin, Donna. Toward a Methodology for Conducting Social Impact Assessment Using Quality of Social Life Indicators. Richland, Washington: Battelle Pacific Northwest Labs, 1976. (ERIC ED 171505).

Organization for Economic Cooperation and Development. A Framework for Educational Indicators to Guide Government Decisions.(21 pp.) Paris: 1973. (ERIC ED 106212).

Patton, Michael Quinn. Qualitative Evaluation Methods. Beverly Hills: Sage Publications, Inc., 1980.

Pasevic, David Victor. Perceptions of Academic Adminis-Administrators in the State University System of Florida on the Importance of Selected Components of Quality In Higher Education. Ph.D. Dissertation. The Florida State University, 1981.

Pirsig, Robert M. Zen and the Art of Motorcycle Maintenance. New York: Bantam Books, 1975.

Rathburn, Carlisle Baxter. Information Perceived as Useful for Program Quality-Evaluation Decision Making by Administrators in FLorida Community Colleges. Ph.D. Dissertation. The University of Florida, 1982.

Rauch, David, ed. Priorities in Adult Education. New York: The MacMillan Company, 1972.

Reagan, Billy R. "Quality Assurance in Education: Borrowing a Lesson from Business." American Education. Vol. 19, No. 4: 19-22. May 1983.

Reece, Barry L. and Braden, Roberts A. "Improving Adult Education Program Development With Fewer Dollars and Quality Control." Lifelong Learning: The Adult Years. Vol. 5, No. 10: 14-15, 19. June 1982.

Ross, Peggy, Bluestone, Herman, and Hines, Fred K. Indexes and Rankings for Indicators of Social Well-Being for U.S. Counties. Supplement to Research Report No. 10. Washington: Economics, Statistics and Cooperatives Service, USDA, May 1979.

Ross, Peggy, Bluestone, Herman, and Hines, Fred K. Indicators of Social Well-Being for U.S. Counties. Rural Development Research Report No. 10. Washington: Economics, Statistics and Cooperatives Service, USDA, May 1979.

Rossi, Peter H. and Williams, Walter. Evaluating Social Programs. New York: Seminar Press, 1972.

Rossi, Peter and Gilmorton, Kerwin J. Social Indicators of Youth Development and Educational Performance: A Programmatic Statement. Paper presented at the First Canadian Congress. Toronto, June 1978. (ERIC ED164587).

Scioli, Frank P. Jr. and Cook, Thomas J. Methodologies for Analyzing Public Policies. Lexington, MA: D.C. Heath and Company, 1975.

Scriven, Michael. Evaluation Thesaurus. Inverness, Calif.: Edgepress, 1980.

Solmon, Lewis C. and Astin, Alexander W. Astin. "A New Study of Excellence in Undergraduate Education. Part One: Departments Without Distinguished Graduate Programs." Change. Volume 13, No. 6: 23-28. September 1981.

Stauffer, Thomas M. editor. Quality - Higher Education's Principal Challenge. Washinton, D.C.: American Council on Education, 1981.

Stauffer, Thomas M. "Sixty-Seven Steps to Advance Quality." Educational Record. Volume 63, No. 1: 58-59. Winter 1982.

Stauffer, Thomas M., editor. Quality - Higher Education's Principal Challenge. Washington, D.C.: American Council on Education, 1981.

Stauffer, Thomas M., editor. Beyond the Falling Sky - Surmounting Pressures on Higher Education. Washington, D.C.: American Council on Education, 1981.

Steele, Sara M. Contemporary Approaches to Program Evaluation. Washington, D.C.: Capital Publications, 1977.

Strother, George B. and Klus, John P. Administration of Continuing Education. Belmont, California: Wadsworth Publishing Company, 1982.

Stuart, John Goodspeed. "Use These 13 Characteristics to Measure the Quality of a School." American School Board Journal. Vol. 170, No. 1: 27-28. January 1983.

Taeuber, Conrad, Special Editor. "America Enters the Eighties: Some Social Indicators." in The Annals of the American Academy of Political and Social Science. Volume 543, January, 1981.

Taeuber, Conrad, Special Editor. "America in the Seventies: Some Social Indicators." in The Annals of the American Academy of Political and Social Science. Volume 435, January, 1978.

Texas Agricultural Extension Service. 4-H Horizons: Statement of National 4-H Goals. College Station: The Texas A&M University System, September 1982.

Tough, Alan. The Adult's Learning Projects. Toronto: The Ontario Institute for Studies in Education, 1971.

United States Department of Health and Human Services. Health - United States - 1980. Hyattsville, Maryland: Public Health Service, 1980. DHHS Publication No.(PHS)81-1232.

United States Department of Agriculture. Youth in America: A Social Indicators Chartbook on the 4-H Eligible Population. Washington: Science and Education Administration/Extension, March 1979.

United Nations Educational, Scientific and Cultural Organization. Social Indicators: problems of definition and of selection. Paris, France: UNESCO Press, 1974.

Van Dusen, Roxann A. Social Indicators, 1973: A Review Symposium. Washington, D.C.: Social Science Research Council, 1974.

Verduin, John R., Jr. and McEwen, Douglas N. Adults and Their Leisure: The Need for Lifelong Learning. Springfield, Illinois: Charles C. Thomas, Publisher, 1984.

Vermilye, Dyckman W., editor. Lifelong Learners - A New Clientele For Higher Education. San Francisco: Jossey-Bass Publishers, 1975.

Vincent, William S. Indicators of Quality. Salisbury, CT: Vincent and Olsen School Evaluation Services, 1972.

Votruba, James C., editor. Strengthening Internal Support for Continuing Education. San Francisco: Jossey-Bass, Inc., 1981.

Ward, James H. "An Approach to Measuring Effectiveness of Social Services." Administration in Social Work. Volume 1, Number 4, Winter 1977.

Webster, David S. "Advantages and Disadvantages of Methods of Assessing Quality." Change. Vol. 13, No. 7: 20-24. October 1981.

Weiss, Carol, Editor. Using Social Research in Public Policy Making. Lexington, MA: D.C. Heath and Company, 1977.

Weiss, Carol. Evaluation Research. Englewood Cliffs, N.J.: Prentice Hall, Inc., 1972.

Wetters, Doris, et al. Indicators and Levels of Change in Consumer Competencies. East Lansing, Michigan: Cooperative Extension Service, Michigan State University, 1979.

White, Jeff. The Magic Collection. June 1975. (ERIC ED 109542)

Wren, M.K. The Phoenix Legacy. New York: Berkley Books, 1981.

Young, Ruth C. Social Indicators for Developing Countries: A New Approach. Ithaca, N.Y.: Cornell University. Cornell Rural Sociology Bulletin Series No. 82, 1977. (ERIC ED137025).

Young, Richard E. and Cunningham, Clarence J. Extension Output Measures as Identified by Extension Clientele. Columbus, Ohio: The Ohio State University, 1977. (mimeo)